

**Taboo Choices and Tragic Dilemmas:
Sacred Values as Facilitators or Barriers in Decision Making**

Thesis

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Abstract

This doctoral thesis explores specific intrapersonal processes which decision makers undergo when confronted with choices that tap into moral considerations. More precisely, it addresses the concept of *sacred values*, which generally refers to issues or entities which individuals deem as inviolable, absolute, and thus precluded from trade-offs against other issues or values. It is argued that sacred values may powerfully shape decision making, and that specific intrapersonal processes operate when issues such as human rights or human dignity are treated as sacred. Moreover, sacred values may have two different effects on decision making, depending on the type of trade-off at hand. In *taboo trade-offs* (i.e., scenarios that pit a sacred value against a non-sacred issue), sacred values may facilitate decision making. In contrast, in *tragic trade-offs* (i.e., scenarios that pit two sacred values against each other), sacred values may hinder the choice process.

The first of two papers examined the influence of sacred values and manipulation of trade-off type on perceived decision difficulty and negative emotions. The findings of two experiments show that taboo trade-offs were perceived as more negatively emotion-laden, but as easier to solve, compared to scenarios not involving sacred values (i.e., routine trade-offs). However, tragic trade-offs were experienced as particularly difficult and stressful.

The second paper explored several indicators of conflict and self-regulation processes. Three experiments assessed measures of ambivalence, emotional stress, fear, and guilt, as a function of sacred value endorsement and trade-off type. The results demonstrate that individuals with higher sacred value endorsement showed more variation in intrapersonal measures depending on trade-off type than people with lower levels, and showed predominantly lower scores in taboo scenarios.

Altogether, the results suggest that sacred values may, in fact, play the role of facilitators or barriers in decision making, and that they provoke specific (cognitive and affective) conflict and self-regulation processes. These results are mainly discussed on the background of dual process models and in terms of the functions of negative emotions in decision making when sacred values are called into question.

Contents

1. Introduction	1
1.1 Overview	5
1.2 Approaching the Concept of Sacred Values.....	6
1.2.1 Sacred Values and Trade-Off Reluctance	6
1.2.2 Emotions and Motivation of Behavior	7
1.2.3 Deontological Reasoning and Commitments to Act	9
1.2.4 Sacred Values and the Self.....	11
1.2.5 Conclusion.....	12
1.3 Measurement and Validation of the Sacred Value Construct	13
1.3.1 Conceptual Considerations on the Specifics of Sacred Values	13
1.3.2 Different Approaches to Measure Sacred Value Endorsements	14
1.3.3 Validation of the Sacred Values Construct	17
1.3.4 Conclusion.....	18
1.4 Determinants of Choice Difficulty and Emotions in Decision Making	18
1.4.1 Trade-Off Difficulty	19
1.4.2 Conclusion.....	20
1.5 Sacred Values as Facilitators or Barriers in Decision Making.....	21
1.5.1 Research Objectives	23
1.5.2 Conclusion.....	24
1.6 Mechanisms Underlying the Effects of Sacred Values	24
1.6.1 Mechanisms Reflecting Facilitation Effects.....	25
1.6.1.1 Choice Rules and Heuristics.....	25
1.6.1.2 Commitments to Act.....	26
1.6.1.3 Emotions as Signals.....	27
1.6.1.4 Moral Intuition.....	29
1.6.1.5 Moral Emotions as Commitment Devices	30
1.6.1.6 Implicit Moral Beliefs and Preconscious Processing	32
1.6.2 Mechanisms Reflecting Barrier Effects.....	34
1.6.2.1 Parallel Affective and Deliberative Processes.....	34
1.6.2.2 Cognitive Neuroscience Research on Dual Processes	35
1.6.3 Conclusion.....	35
1.7 Cognitive and Affective Indicators for Conflict and Self-Regulation Processes..	36
1.7.1 Research Objectives	37
1.7.2 Conclusion.....	39

2. Manuscript Hanselmann & Tanner (2008)	41
Abstract	43
Sacred values and trade-off types	47
Overview of experiments	48
Experiment 1	50
Method	50
Results and discussion	53
Experiment 2	56
Method	57
Results and discussion	61
General discussion	64
References	69
Appendix A	73
Appendix B	78
Author note	81
3. Manuscript Hanselmann, Tanner, & Duc (2010)	83
Abstract	85
Sacred Values and Trade-Off Types	88
Goals and Predictions	93
Experiment 1	95
Value Structure and Trade-Off Types	95
Method	97
Results and Discussion	99
Experiments 2 and 3	102
Method	103
Results and Discussion	105
General Discussion	110
References	116
Author Note	124
4. General Discussion	125
4.1 Summary of Research Objectives and Findings	126
4.1.1 First Research Project	126
4.1.2 Second Research Project	127
4.2 Discussion of Findings	128
4.2.1 Sacred Values and Negative Emotions	128
4.2.2 Sacred Values and Decision Difficulty	129
4.2.3 Conflict and Self-Regulation Processes	130

4.2.3.1	Sacred Values as Facilitators	130
4.2.3.2	Sacred Values as Barriers	132
4.3	Limitations	132
4.3.1	Potential Ambiguities With Regard to Concepts and Measures.....	132
4.3.2	Generalizability of Findings.....	134
4.3.3	Forced Choice Paradigm	135
4.4	Outlook	136
4.4.1	Indirect Indicators	136
4.4.2	Mechanisms Reflecting Facilitation and Barrier Effects.....	137
4.4.2.1	Emotion as Signals and Somatic Markers	137
4.4.2.2	Emotions as Commitment Devices and Self-Regulation.....	138
4.4.2.3	Implicit Moral Concepts and Preconscious Processing.....	139
4.4.2.4	Cognitive Strategies.....	140
4.4.2.5	Brain Imaging	140
4.5	Conclusion	141
5.	References.....	143
6.	Appendix.....	159
6.1	Appendix to the Manuscript Hanselmann & Tanner (2008).....	160
6.1.1	Experiment 1: Decision Scenarios	160
6.1.2	Experiment 1: Recruitment of Participants	163
6.1.3	Experiment 1: Paper-and-Pencil Questionnaire	165
6.1.4	Experiment 2: Decision Scenarios	173
6.1.5	Experiment 2: E-Mail Invitation	178
6.1.6	Experiment 2: Online Questionnaire.....	179
6.2	Appendix to the Manuscript Hanselmann, Tanner, & Duc (2010).....	192
6.2.1	Experiment 1: Decision Scenarios	192
6.2.2	Experiment 1: E-Mail Invitation	194
6.2.3	Experiment 1: Online Questionnaire.....	195
6.2.4	Experiments 2 and 3: Decision Scenarios	206
6.2.5	Experiments 2 and 3: E-Mail Invitation	207
6.2.6	Experiment 2: Online Questionnaire.....	208
6.2.7	Experiment 3: Online Questionnaire.....	215
6.3	Curriculum Vitae.....	222

1. Introduction

Human dignity is a fundamental and central principle in Western traditions of philosophy, law, and religion, and refers to the belief that each human being has an inherent, inviolable, and absolute significance that has to be protected unconditionally. According to Immanuel Kant's (1797) seminal work on moral philosophy, there are beings and things which do not have a certain value or price, and thus cannot be simply compared or related to other values. However, they are "ends in themselves" and exist beyond all value. In other words, they possess their own dignity as an intrinsic worth.

The concern of the principle of human dignity has been broadly expressed in international and national law, such as the Universal Declaration of Human Rights (United Nations, 2002), or the Swiss Federal Constitution (Swiss Confederation, 1999). Moreover, human dignity has repeatedly been a central matter in a large variety of public controversies about political, societal, judicial, and economical issues. For instance, the discovery of severe maltreatments of terror suspects held in various U.S. army bases has prompted heated debates regarding whether torture should be allowed to force information from terror suspects about planned terror attacks. Other discussions have concerned the questions of whether research on stem cells using human embryos should be permitted, or whether death penalties should be reenacted in cases of severe violent crimes. In the public sphere, debates about such proposals often evoke harsh reactions of anger and outrage, and strong demands to affirm the rights and the dignity of human beings.

To capture this phenomenon, psychologists have developed the concept of *sacred values* (or protected values), which generally refers to issues, entities, or beings which are seen as inviolable and infinitely significant (e.g., Baron & Spranca, 1997; Tanner, Ryf, & Hanselmann, 2009; Tetlock, 2003). Since individuals deem such values as absolute, they are often highly reluctant to make trade-offs of sacred values against other issues or values, particularly monetary benefits. Although previous research has widely contributed to a better comprehension of this phenomenon by examining people's affective and behavioral reactions to *observed* violations of sacred values, still little is known about the processes which individuals undergo when they are *themselves* in the role of the decision maker, confronted with scenarios that put sacred values, for instance human dignity, at risk. Initial studies have suggested that individuals feel

emotionally disturbed and morally “contaminated” even when merely contemplating such choices and trade-offs (e.g., Tetlock, 2003). Hence, the aim of the present research is, in general terms, to address these decisions in more detail, and to explore the underlying intrapersonal processes.

There are numerous domains in politics, economics, medicine, etc., in which individuals are faced with decisions that tap into sacred values, and are requested to make trade-offs and cost-benefit analyses. Politicians and government authorities, for example, have the duty to do the best possible for the protection and welfare of each citizen. However, due to restricted financial resources, they cannot escape cost-benefit analyses and are required to invest the money in a way which results in the best possible benefit. In other words, even though such a procedure obviously violates the principle that human lives, health, or dignity are absolute and protected from trade-offs, decision makers are obliged *ex officio* to put a monetary value on the life of each human being, in order to optimize the outcome for each individual. Such cost-benefit analyses are customary, for instance, when deciding how many policemen are required for the best possible security in a town, which safety measures should be taken to optimize traffic security, which environmental policies are implemented to minimize health risks, or which medicinal measures are justified to optimize the life quality of elderly people and prolong their lives. Another example of a decision scenario that potentially tapped into sacred values was the recent case of a convict on hunger strike in Switzerland, who tried to achieve a prison furlough. In this case, authority officials and doctors had to decide whether to apply force feeding. In doing so, they were confronted with the dilemma of whether to violate the convict’s integrity and right to self-determination by applying force feeding, or to neglect the authority’s duty to take care of people held in custody by letting him die of starvation. Another example of a particularly hard dilemma was provided by an article in the Air Security Act, which was enacted in Germany in response to the 9/11 attacks, but later declared as unconstitutional by the German Federal Constitutional Court. This article permitted the army to shoot down hijacked commercial airplanes once the hijackers’ intention to crash into civilian targets had become apparent. If such a case had become reality, it would have confronted a member of the government with the request to trade-off human lives against each other, and thus

to sacrifice lives in order to save other lives. Obviously, even though this scenario sounds very strange or even surreal, it may be predicted that most individuals, when faced with such fatal decisions, would struggle and contemplate desperately to come to a solution, suffering emotional stress which can hardly be surpassed.

Hence, the goal of my research is to examine more thoroughly what decision makers go through when confronted with choices that tap into sacred values. According to Tetlock (2003), I assume that decisions on sacred values have a largely distinctive subjective significance, compared to ordinary “routine” choices. Sacred values may powerfully shape decision making, and I propose that specific intrapersonal processes operate when issues such as human rights, lives, or dignity are treated as sacred. Importantly, these processes may additionally be highly dependent on the extent of conflict which is experienced due to the type of trade-off. That is, a choice scenario in which a sacred value is pitted against another (not sacred) issue (i.e., *taboo trade-off*) should be experienced as much less conflicting and difficult to solve, because the sacred value at hand allows any trade-offs to be rejected from the outset. In sharp contrast, a tough dilemma involving two sacred values which compete against each other (i.e., *tragic trade-off*) should be experienced as particularly conflicting and difficult to solve because the decision maker is forced to choose the lesser of two evils. No matter what choice is made, he or she has to violate one of the two sacred values and to relinquish its absoluteness in order to come to a solution. Therefore, I assume that sacred values can have two different effects on decision making, dependent on trade-off types, thereby representing two sides of the same coin: Sacred values may help to *ease* decision making or *hinder* the choice process. In other words, they may play the role of *facilitators* or *barriers* in decision making, which I expect to be reflected in specific cognitive and affective processes. As I will outline below in more detail, I assume that *negative emotions* may play distinctive roles in choices which put sacred values at risk. Finally, it is important to note that my research does not focus on choices per se, but rather aims to shed light on processes and to provide a better comprehension of mechanisms behind the effects of sacred values in decision making.

1.1 Overview

The outline of this doctoral thesis is as follows: In Section 1.2, I will first approach the concept of sacred values and trade-off reluctance, and then present some insights into specific characteristics with respect to sacred values that I deem as relevant for my research, such as emotional and motivational consequences, and associations with principled reasoning and self-identity. In Section 1.3, I will briefly present several methods to measure sacred value endorsements and some selected results with respect to the validation of the sacred values construct. In Section 1.4, I will give, as a preparation for my own work, a short general overview of findings from decision making research revealing possible determinants that render choices more or less difficult and emotion-laden. Subsequently, in Section 1.5, I will introduce my first research project which addressed the roles of sacred values as facilitators or barriers in decision making and explored the link with negative emotions. The results of this project have already been published (see Section 2; Hanselmann & Tanner, 2008). Following this, Section 1.6 outlines various theories and findings which provide potential (and, at least, partial) explanations for the processes underlying the facilitation and barrier effects of sacred values in decision making. Next, Section 1.7 introduces my second research project, which took a closer look at the mechanisms behind these effects and examined several cognitive and affective indicators for conflict and self-regulation processes. The results of this research have been recently submitted for publication (see Section 3; Hanselmann, Tanner, & Duc, 2010). Sections 2 and 3 contain the two manuscripts of the articles recently published or submitted, respectively. Finally, in Section 4, I will discuss the findings of the current research and present some ideas for future research.

1.2 Approaching the Concept of Sacred Values

1.2.1 Sacred Values and Trade-Off Reluctance

Normative theories of decision making, such as utility-based models, assume that each choice requires a trade-off between values or attributes if there is no clearly superior option. A trade-off means compensating for costs or disadvantages on one attribute with benefits or advantages on another attribute (e.g., Keeney & Raiffa, 1976; von Neumann & Morgenstern, 1947). For instance, a consumer looking for a new car may be concerned with the trade-off between the attributes purchase price, size, and motor performance. Assuming that this consumer gives more weight to the motor performance than to the other attributes, he will probably accept a higher price and a larger size in return for a better performance. According to the normative perspective, any types of values or attributes can be traded off, and individuals are always able to add up disadvantages and benefits in order to arrive at a choice which provides the best overall utility. Importantly, as a prerequisite for trade-offs and exchanges, economic models suggest that each value or entity has its own utility and exchange value, mostly in monetary form (e.g., Smith, 1776). In essence, this assumption holds for all types of values, including material and ideational values as well as abstract norms. In this vein, early theories of social exchange (e.g., Homans, 1961; Thibaut & Kelley, 1959) characterize human relationships as a process of exchanging resources such as care, information, love, aversion, reputation, or financial rewards.

In contrast to these theoretical assumptions, a growing number of empirical findings have demonstrated that individuals are often highly *reluctant to make trade-offs* among certain values or entities and to sacrifice them in return for other values, particularly economic ones (e.g., Gregory & Lichtenstein, 1994; Ritov & Baron, 1999). Note that these findings also nicely reflect Kant's (1797) theoretical notion of human dignity as an issue which cannot be compared with other values.

To comprehend this phenomenon of trade-off reluctance, several authors assume that people treat certain values as absolute and protected from trade-offs with other values. Hence, such values have been conceptualized as *sacred values* (Fiske & Tetlock,

1997; McGraw & Tetlock, 2005; Tetlock, Kristel, Elson, Lerner, & Green, 2000), *protected values* (Baron & Spranca, 1997), *taboo values* (Lichtenstein, Gregory, & Irwin, 2007), or *moral mandates* (Skitka, 2002), and refer to any entity an individual or a community considers as infinitely significant and inviolable, and therefore as non-tradable and non-substitutable (e.g., Tanner et al., 2009; Tetlock et al., 2000). Sacred values may encompass concrete or abstract entities (such as human lives, animals, plants, physical integrity, organs for transplant operations, or the unborn life), desirable states or conducts of behaviors (such as human rights, human dignity, honesty, security, or freedom), or interpersonal values (such as love, friendship, or trust) (e.g., Andre, 1992; Fiske & Tetlock, 1997; Foa, Converse, Törnblom, & Foa, 1993; Medin, Schwartz, Blok, & Birnbaum, 1999). In the remainder of this section, I will present some selected theories and findings which point out the unique features of sacred values, showing that they go far beyond those of merely strong preferences, attitudes or “normal” values.

1.2.2 Emotions and Motivation of Behavior

To highlight the subjective significance of sacred values and trade-off reluctance, several studies examined people’s emotional and behavioral responses toward trade-offs involving sacred values. For example, Tetlock et al. (2000) provided participants with examples of *routine trade-offs* (i.e., pitting two secular values against each other; e.g., cleaning service against money) and *taboo trade-offs* (i.e., pitting a sacred value against a secular value; e.g., adoption rights against money), and assessed and compared participants’ reactions to these scenarios. Unlike routine trade-offs, taboo trade-off proposals evoked harsh emotional responses of protest and moral outrage, strong desires to sanction violators of the sacred values at hand, and considerable willingness to volunteer in actions that might prevent violations. Importantly, as Tetlock (2003) argues, not only actual violations of sacred values and taboo trade-offs elicit feelings of outrage and intentions to punish the transgressors; even calling sacred values into question and merely contemplating taboo trade-offs may evoke feelings of distress and disturbance.

As an extreme and impressive example of how far-reaching reactions toward attempts to compromise sacred values can be, Ginges, Atran, Medin, and Shikaki (2007) explored the role and consequences of sacred values in the Middle East conflict between Israelis and Palestinians. In a series of field experiments, Ginges et al. provided samples of Palestinians and Israelis living in the West Bank and Gaza with hypothetical proposals (“peace deals”) involving compromises over issues that are integral to the conflict and potentially tap into taboo trade-offs, but will result in peace and a two-state solution (i.e., a Jewish state of Israel and a Palestinian state in the West Bank and Gaza). For instance, Palestinians responded to the proposition that they should give up their right of return to their lands in Israel, whereas Israelis responded to the proposition to give up parts of their “Land of Israel”. Findings showed that individuals who endorse the right of return or the “Land of Israel” as a sacred value, respectively, reacted with strong feelings of outrage, and showed support for violence such as suicide attacks toward others assaulting their sacred values. Interestingly, outrage and support for violence were particularly strong when peace deals involving taboo trade-offs were additionally combined with monetary incentives, but, conversely, were reduced when peace deals were combined with concessions on the opponent’s side regarding their own sacred values. These results demonstrate impressively the dynamics of sacred values and trade-off reluctance in real-world conflicts: On the one hand, an increase of incentives to compromise over sacred values may backfire and result in a rapid increase of outrage and offensive behavior, especially when the taboo character of the trade-off at hand is exacerbated through additional monetary incentives. On the other hand, approval of compromises over one’s own sacred values may be greater in a conflict situation if the adversary also shows concessions that imply a similar loss over their own sacred values.

Another important line of research suggests that sacred values may have specific motivational effects on interpersonal and other forms of behaviors that go far beyond the effects of strong attitudes or preferences. In particular, Skitka and colleagues were able to show that moral mandates (a concept sharing properties with sacred values) may build up an emotionally charged “moral conviction” and work as motivational forces (e.g., Bauman & Skitka, 2009; Mullen & Skitka, 2006; Skitka, 2002; Skitka & Bauman,

2008; Skitka, Bauman, & Sargis, 2005). Specifically, participants with a strong moral conviction maintained a greater social distance (i.e., preferred rather distant than intimate relationships) as well as a greater physical distance (i.e., placed themselves on a more remote chair in discussion sessions) from people who did not share their own moral view. Moreover, when solving tasks in groups, individuals with a strong moral conviction showed less goodwill and cooperativeness toward other group members who showed dissimilar moral beliefs (Skitka et al., 2005). Finally, moral convictions associated with various controversial political issues (e.g., abortion, gay marriage) were shown to operate as strong motivators of voting intentions and behavior, irrespective of specific attitudes towards these issues and party preferences (Skitka & Bauman, 2008).

As an interesting extension of this research, Wright, Cullum, and Schwab (2008) found that interpersonal reactions which are evoked by moral convictions can be explained not exclusively by strong moral emotions, but especially by specific cognitive beliefs about moral issues at hand (i.e., they are seen as non-negotiable and objectively grounded). Importantly, these findings suggest that unique properties of sacred values (i.e., issues seen as absolute and non-negotiable) may have distinctive motivational and interpersonal consequences, which might be additionally exacerbated by the strength of feelings of anger and outrage. Moreover, they demonstrate the social power of moral convictions and sacred values to polarize groups, and to tear apart or bond together individuals through more or fewer shared values. As I will outline in the next paragraph, the strong association between sacred values and emotion-laden convictions and motivations is also reflected in their link to a deontological perspective.

1.2.3 Deontological Reasoning and Commitments to Act

Another central feature of sacred values is their relation to deontological reasoning (e.g., Baron & Spranca, 1997; Tanner, 2009; Tanner & Medin, 2004; Tanner, Medin, Iliev, 2008). In contrast to a consequentialist (utilitarian) perspective, which focuses on the outcomes of actions and not on actions themselves, a deontological perspective focuses on the inherent rightness or wrongness of an action, irrespective of its consequences. The philosophical concept of deontology, which is derived from the

Greek word *δεον* (duty), emphasizes moral principles and rules in terms of prohibitions against actions and obligations to act, such as the duty to help other people or the duty not to lie (e.g., Birnbacher, 2003; Broad, 1930; Kant, 1797).

In line with the perspective of deontological principled reasoning, several studies have shown that individuals endorsing sacred values focus on what is morally right or wrong, and on what they ought to do or what they should not do, rather than on the consequences of their acts. For instance, Baron and Spranca (1997) provided evidence that sacred values are related to insensitivities to the magnitude as well as the probability of certain outcomes. In a similar vein, recent studies examined people's commitment to honesty as a sacred value in the context of business choices, and demonstrated that individuals who feel strongly committed to the principle of honesty as a sacred value were actually more likely to behave honestly, irrespective of financial incentives to show dishonest choices (Tanner, Gibson, Wagner, & Berkowitsch, 2010). These findings corroborate the role of sacred values in decision making as commitments to act in accordance with certain principles, regardless of potentially costly consequences. Furthermore, these results intriguingly emphasize the reluctance of trading off sacred values against concrete financial incentives.

Following the observation that deontological reasoning is associated with a greater sensitivity to principles of obligations and prohibitions than to consequences of actions, people who endorse sacred values should also be more sensitive to the distinction between actions and omissions. That is, they should differentiate to a stronger extent whether an outcome results from an action or from inaction, compared to people who do not endorse sacred values. A recent study using environmental choice scenarios was able to confirm this assumption, and additionally demonstrated that individuals who endorse sacred values tended to prefer actions to omissions more strongly compared to people who did not endorse sacred values, even though both alternatives result in similar consequences (Tanner, 2009). These findings provided further evidence for the assumption that people who endorse sacred values often strongly favor actions over inactions (i.e., "action bias"; e.g., Patt & Zeckhauser, 2000; Tanner & Medin, 2004; Tanner et al., 2008). It should be noted that these findings with regard to the "action bias" obviously contradict the prevailing view that sacred values

are related to an “omission bias”, that is, a tendency to prefer omissions to actions (e.g., Ritov & Baron, 1990, 1999). While the exact preconditions for the emergence of either the action bias or the omission bias has largely remained unclear, it seems that people who endorse sacred values often feel particularly strongly obligated to principles such as “bringing about good” or “taking care of others” (cf. Nunner-Winkler, 1984), irrespective of whether their actions will result in successful outcomes. In this regard, it is plausible to assume that sacred values may be a powerful source for activism and engagement to safeguard human rights, animal lives, or the environment (e.g., Horwitz, 1994).

In conclusion, these findings – together with the results on behavioral consequences of moral conviction (e.g., Bauman & Skitka, 2009) – emphasize the *commitment function* of sacred values that motivates people to actively engage in protecting and reaffirming sacred values and moral standards. As I will argue in the following, the strong commitment component might be due not least to the importance of sacred values with regard to the self-concept.

1.2.4 Sacred Values and the Self

In their sacred value protection model, Tetlock et al. (2000) made two key assumptions regarding how people cope with threats to sacred values. First, as already mentioned, people react with strong *moral outrage* and intentions to punish transgressors when they are faced with threats to sacred values or violations of taboo trade-offs. This mechanism seems to serve as an important motivator to affirm sacred values on the interpersonal level. Second, when observing violations of taboo trade-offs – or even when requested to contemplate taboo trade-offs – individuals feel “contaminated” by such situations and seek to convince themselves of their own moral worthiness by acts of *moral cleansing*. They express, for instance, their willingness to volunteer in political action groups fighting against propositions that would allow transgressions of sacred values, or to donate to an organ-donation campaign which should help to prevent ideas to install a market for organs. Obviously, people not only may self-affirm their moral worthiness by such acts of moral cleansing, but additionally

reaffirm the sacred values at risk. Hence, moral outrage and moral cleansing are two crucial mechanisms serving the protection of sacred values.

The findings and interpretations about moral cleansing suggest that sacred values, and probably moral values in general, might be central and important aspects of the self-identity. In this regard, sacred values were, in fact, found to be associated with a strong *moral identity* (Merz & Tanner, 2009). Moral identity has been defined as a self-conception organized around a set of various moral traits (i.e., values or principles such as being honest, helpful, generous, etc.; Aquino & Reed, 2002; Blasi, 1984). Moreover, they indicate the role of the moral identity as a kind of self-regulatory mechanism that motivates moral action. In a series of experiments, it was confirmed that the more likely a person views certain values as being central to his or her self-concept, the stronger the motivational driver between moral identity and behavior is, such as volunteering activities or charitable donations (e.g., Aquino & Reed, 2002; Reed, Aquino, & Levy, 2007). In this vein, assuming that sacred values are in fact central parts of a person's self-concept, they should prompt and facilitate acts and choices which help to uphold this self-concept.

1.2.5 Conclusion

A growing body of research has intriguingly demonstrated that individuals back up their sacred values by strictly rejecting trade-offs, by expressing harsh reactions of outrage, and by showing various behaviors that help to protect the status of the sacred values at risk. Furthermore, findings suggest that sacred values are associated with deontological reasoning and strong commitments to serve certain moral principles such as prohibitions and obligations to act. Finally, research suggests that sacred values are related to central parts of the self-concept, which additionally highlights the distinctive roles of emotions and motivations to act with respect to sacred values.

Before focusing more closely on further areas of research in which my own work is embedded, I will outline some conceptual considerations which must be kept in mind when developing an instrument to capture what individuals deem sacred, and then present different approaches to assess sacred value endorsements. After that, I will show

some empirical data with respect to the validation of the construct, which broadly reflect the unique features of sacred values.

1.3 Measurement and Validation of the Sacred Value Construct

1.3.1 Conceptual Considerations on the Specifics of Sacred Values

As already mentioned, all characteristic features of sacred values which have been outlined so far highlight essential differences between sacred values and other value concepts. In other words, sacred values are similar, but not identical, to “normal” values, commonly seen as stable beliefs about desirable states or conducts of behaviors (e.g., Rohan, 2000; Schwartz, 1992). While the concept of values does not necessarily exclude trade-offs, sacred values are inherently linked with absolute demands, rejections of trade-offs, and strong commitments to defend their status. Furthermore, sacred values are also similar to strong attitudes, but are additionally linked to moral convictions and deontological reasoning.

However, it is important to note that, even though individuals strictly express their belief that they perceive some issues as absolute and thus protected from any cost-benefit consideration, they are not always able to actually uphold such an absolute demand due to reality constraints. In concrete terms, there may be situations in which the costs of defending sacred values become simply unbearable (e.g., tragic trade-off scenarios; Bartels, 2008; Tetlock, 2003). Nevertheless, people holding sacred values affirm that they are serious in their view, and try to do their utmost to uphold sacred values (e.g., Bartels & Medin, 2007). Importantly, not least the facts that violations of sacred values provoke harsh reactions of outrage, and that even the mere contemplation of taboo trade-offs evoke feelings of distress demonstrate that commitments to sacred values are *real* even if the individuals are not always able to defend them successfully.

Following these considerations, there may be ostensible discrepancies between what people actually do and what people deem they ought to do with respect to sacred values. One possibility to bridge this gap refers to recent literature suggesting a differentiation between a stronger and a weaker notion of sacred values and trade-off

reluctance (e.g., Tanner, 2009). While the stronger notion demands an absolute trade-off reluctance, the weaker notion demands substantially greater thresholds at which people holding sacred values would accept some trade-offs. In this regard, it is conceivable that people's expressions of beliefs rather reflect the stronger notion of sacred values, whereas actual behaviors reflect the weaker notion.

Most importantly, not least due to the fact of possible discrepancies between expressions of beliefs and actual behaviors, it is indispensable to use reliable and valid measures to capture the extent to which an individual deems something as inviolable and absolute. These measures should go beyond simple observations of whether people accept or reject certain choices or behaviors, because such observations ignore the aforementioned discrepancies and, furthermore, cannot conceptually distinguish sacred values from other "normal" values or strong attitudes. However, measures of sacred value endorsements should take into account a broad variety of essential characteristics of sacred values. In the following, I will critically present different approaches to measuring sacred value endorsements.

1.3.2 Different Approaches to Measure Sacred Value Endorsements

Until recently, research on sacred values has utilized various single or multiple item measures which have not been proven in terms of their reliability or construct validity. Generally, two different approaches to assess sacred values have emerged in previous research. The first approach, which was developed in initial studies on protected values, represents a *direct* way of assessing sacred value endorsements, and aims to capture whether individuals perceive the current situation as concerning issues or values which must not be sacrificed (e.g., Baron & Spranca, 1997; Ritov & Baron, 1999). In other words, this direct approach addresses trade-off reluctance as a distinctive feature of sacred values. As an illustrative example, Ritov and Baron asked their participants whether they would accept opening a river dam once a year in order to save twenty fish species that are threatened with extinction due to the dam, when by opening the dam two other species would become extinct due to the changing water level. To assess whether respondents associate sacred values with this situation, a single item

with several categorial alternatives such as “This is acceptable if it leads to some sort of benefits that are great enough” or “This is not acceptable no matter how great the benefits” was provided, whereby the latter alternative formed the sacred value option. In other words, respondents who selected this option were categorized as people who associated a sacred value with the current situation.

The second approach represents an *indirect* way to assess sacred value endorsements in that respondents are asked to judge choices and acts committed by others. Thus, respondents are requested to appraise the observed choices and acts on multiple items aiming to capture the extent of *moral outrage*, which is assumed to reflect the level of sacred value endorsement (e.g., Tetlock et al., 2000). For instance, respondents are presented with several acts that potentially violate sacred values (e.g., “buying and selling human body parts for medical transplant operations”) and were asked to rate these acts along a variety of response scales which constitute the index of moral outrage (e.g., *bad – good*; *not at all upsetting – very upsetting*; *no anger – great deal of anger*). As a result, high ratings of moral outrage are interpreted as an indirect indicator of strong sacred value endorsements.

However, both the direct and the indirect approach may have, at least in their original versions, substantial disadvantages. On the one hand, the direct approach has to be judged critically because using a single item is problematic due to its rather doubtful reliability. On the other hand, the indirect approach, which is based on the reactions to an observed behavior, does not allow it to be precisely specified whether this behavior is seen as actually violating sacred values. Therefore, due to these and other reasons, Tanner, Ryf, and Hanselmann (2009) recently developed and validated a new instrument – the *Sacred Value Measure (SVM)* – which contains multiple items and encompasses the direct and the indirect approach in two separate subscales.

First, the *SVM-D* subscale contains items that reflect essential features of sacred values in a direct manner, such as unwillingness to sacrifice a value, denial of trade-offs, inviolability, or incommensurability. Thus respondents are presented with a description of an issue which is potentially associated with sacred values, are then provided with five statements reflecting features of sacred values, and are asked to indicate the extent of their agreement with these items on response scales when

considering the issue at hand (see Table 1 for question examples and the full description of the items).

Table 1. Sacred Value Measure: Question Examples and Items of the Direct (SVM-D) and Indirect (SVM-I) Subscale

SVM-D^a

Human rights are something...

1. that we should not sacrifice, no matter what the benefits (money or something else).
 2. which one cannot quantify with money.
 3. for which I think it is right to make cost-benefit analyses. *
 4. for which I can be flexible if the situation demands it. *
 5. that involves issues or values which are inviolable.
-

SVM-I^b

What do you think about torturing imprisoned terror suspects to force information to be revealed about possible terrorist attacks? This is...

1. *not at all praiseworthy* (1) – *very praiseworthy* (7) *
 2. *not at all embarrassing* (1) – *very embarrassing* (7)
 3. *not at all acceptable* (1) – *very acceptable* (7) *
 4. *not at all outrageous* (1) – *very outrageous* (7)
 5. *not at all disgusting* (1) – *very disgusting* (7)
 6. *very immoral* (1) – *very moral* (7) *
-

Note. Items with an asterisk (*) have to be recoded. Adapted and translated from “Geschützte Werte Skala (GWS): Konstruktion und Validierung eines Messinstrumentes [Sacred Value Measure (SVM): Construction and validation of an instrument to assess sacred values],” by C. Tanner, B. Ryf, and M. Hanselmann, 2009, *Diagnostica*, 55, 174-183. Copyright 2009 by Hogrefe Verlag Göttingen.

^a7-point response scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). ^b7-point response scales.

Second, the *SVM-I* subscale was adapted from the moral outrage items (Tetlock et al., 2000) and assesses sacred value endorsements indirectly through people’s reactions either to observed violations of sacred values or to hypothetical propositions potentially violating sacred values. Respondents are presented with a description of a certain behavior or proposition and are then asked to judge this behavior or proposition on six response scales (see Table 1).

1.3.3 Validation of the Sacred Values Construct

In several studies, the SVM was proven in terms of reliability and discriminant or convergent validity (Tanner et al., 2009; Merz & Tanner, 2009). In the following, some selected results are briefly presented. When testing for the dimensionality of the sacred values construct, the direct (SVM-D) and the indirect (SVM-I) measure emerged as distinct but considerably correlated factors, which suggests a dual dimensionality of cognitive and affective components of sacred values.

In terms of discriminant validity, it was shown that the sacred value construct is different from the concept of attitude importance (e.g., Petty & Krosnick, 1995; Pomerantz, Chaiken, & Tordesillas, 1995). Specifically, results confirmed that sacred values are indeed related to attitudes and values that are important with regard to the self-concept of a person, but go beyond the mere importance in that they exhibit specific characteristics such as absoluteness and inviolability (Tanner et al., 2009). This finding is in line with research showing that moral mandates (a concept sharing properties with sacred values) are similar to strong attitudes but have additional characteristics that go beyond those of strong attitudes (Skitka et al., 2005; see also Section 1.2.2).

Moreover, in terms of convergent validity, some interesting associations between the extent of sacred value endorsements and several personality dimensions such as ethical ideologies (e.g., Forsyth, 1980), ethical basic positions (e.g., Witte & Doll, 1995), and moral identity (e.g., Aquino & Reed, 2002) were found. In concrete terms, sacred value endorsements were positively associated with an absolutistic perspective (i.e., pronouncing universal and inviolable principles as guiding values), deontological and intuitionist basic positions (i.e., emphasize the inherent moral rightness or wrongness of actions rather than consequences or other justifications), and strong self-importance of core moral values (i.e., internalization of moral traits that are seen as central to one's self-concept).

1.3.4 Conclusion

In this section, I made some considerations on the necessity of a reliable and valid instrument to capture sacred value endorsements, gave an overview of different measurement approaches, and presented a recently developed and validated instrument, the Sacred Value Measure (SVM; Tanner et al., 2009). This measure encompasses two different subscales, which reflect a direct and an indirect measure, respectively. While the SVM-D contains items that directly address essential features of sacred values, the SVM-I assesses sacred value endorsements indirectly through people's reactions to observed violations or to hypothetical propositions. In several validation studies, it has been shown that sacred values are conceptually distinct from strong attitudes and important values, but are related to absolutist reasoning as well as to moral values that are seen as central to one's moral identity. These findings further underline the distinctive characteristics of sacred values.

Before introducing my first research project, which addressed the role of sacred values as facilitators or barriers in decision making and examined the link with negative emotions, I will present in the following a short overview of findings with respect to choice difficulty and emotions that I deem relevant for my research.

1.4 Determinants of Choice Difficulty and Emotions in Decision Making

Personal experiences in everyday life show us quite plainly that choices differ greatly with respect to their difficulty or emotional charge. Over some decisions, we dither and ponder a great deal, or we even try to avoid them, perceiving them as severe and highly stressful. For other forms of decisions, we might care much less, and therefore not make any special effort to come to a solution. In contrast to such experiences, classical theories of decision making – such as the previously mentioned normative, utility-based models (e.g., Keeney & Raiffa, 1976) – do not account for the question of why some choices are more difficult or emotion-laden than others. Whether choices are about buying a new car, selecting a job, getting married, laying off employees, performing an abortion, applying torture, or conducting animal experiments

– classical models of decision making would predict them to be solved in an equally rational and unemotional manner.

Psychological research on judgment and decision making, however, has rejected this relatively simplistic perspective and identified plenty of factors which affect perceived decision difficulty, emotional charge, and tendencies to postpone or avoid when making decisions (e.g., Anderson, 2003; Janis & Mann, 1977; Luce, 1998; Luce, Bettman, & Payne, 1997; Luce, Payne, & Bettman, 1999; Payne, Bettman, & Johnson, 1993). In the following, at least some important contributors to decision difficulty will be outlined more narrowly (see Anderson, 2003, for an extensive review). For example, the overall attractiveness of the choice set, differences in attractiveness between options, or the number of choice options may have an influence on choice difficulty (e.g., Dhar, 1997; Dhar & Nowlis, 1999; Redelmeier & Shafir, 1995; Tversky & Shafir, 1992). Moreover, individual differences or specifics of the cultural background such as neuroticism, general decisiveness, confidence in one's own decision making ability, thinking styles, aspirations, and beliefs and values such as the freedom of thought, may produce differences in choice difficulty (e.g., Mann et al., 1998; Milgram & Tenne, 2000; Tse, Lee, Vertinsky, & Wehrung, 1988).

1.4.1 Trade-Off Difficulty

More central to my research, several studies suggest that decision difficulty as well as negative emotions may depend on the extent to which choices involve attributes that people deem difficult to trade off. This has been assumed to be the case when a trade-off involves attributes with potentially threatening consequences or highly valued goals (Luce, 1998; Luce et al., 1997, 1999). For instance, in a car purchase scenario, it is conceivable that the buyer has to trade off safety attributes against styling attributes. In this scenario, safety attributes are more likely to be related to potentially threatening consequences (e.g., car passengers being injured or killed in an accident) than styling attributes (e.g., attracting attention because of the car's ugly shape), and are thus associated with a high *trade-off difficulty*, because the buyer of the car is more reluctant to accept a loss on safety attributes. As a consequence, when faced with difficult trade-

offs, individuals experience higher levels of negative emotions and subsequently are more likely to avoid the choice (if possible) in order to reduce negative feelings (e.g., Luce, 1998). Hence, the level of negative emotions indicates the degree of trade-off difficulty in the choice situation. Even though not mentioned explicitly by the authors, it is plausible to assume that difficult and emotion-laden trade-offs are also associated with higher *overall decision difficulty*. In conclusion, this would imply that choices eliciting negative emotions are generally perceived as difficult. However, as I will point out later in more detail, I contradict this view by assuming that certain choices are easy to solve *despite* eliciting negative emotions.

Another characteristic of choice options that may account for trade-off difficulty is the taxonomy or category of attributes that have to be traded off. Beattie and Barlas (2001) demonstrated that non-commodities (i.e., objects or attributes that cannot be transferred and are not tradable; e.g., friendship, health) are more difficult to trade off than commodities (i.e., objects or attributes that are sold or bought in markets; e.g., computers, cameras) or currencies (i.e., objects or attributes that act as substitutes for commodities; e.g., money, vouchers). In consequence, the combinations of categories that were involved in choices triggered specific decision strategies, and thus predicted how easy or difficult the overall choice will be (assessed by reaction times). Specifically, choices requesting trade-offs of non-commodities against commodities or currencies were found to be less difficult than those involving trade-offs of non-commodities against other non-commodities. Probably, in the former, a non-compensatory (i.e., lexicographic) choice rule was utilized that dictated a clear preference for non-commodities over the other categories, while in the latter, presumably other, more extensive (compensatory) strategies were used. It should be noted here that the concept of non-commodities is similar to the notion of sacred values in that both share features such as the preclusion from trade and transfer.

1.4.2 Conclusion

Interestingly, both emotional trade-off difficulty and categorical dimensions as potential determinants for decision difficulty reveal some parallels with the concepts of

sacred values and trade-off reluctance. Specifically, these approaches are similar in that they explain differences in emotions and trade-off difficulty by specific features of the attributes or objects (e.g., potentially threatening consequences, tradability, absoluteness) which are involved in choices. Moreover, they suggest that some trade-offs and choices are more emotion-laden than others and differ with regard to perceived difficulty. However, an important difference may be, as stated above, that the trade-off difficulty approach suggests a positive relationship between negative emotions and choice difficulty. In contrast, I assume that certain choices involving sacred values may be perceived as quite easy *despite* eliciting negative emotions, while others may be experienced both as difficult *and* emotion-laden. This assumption is central to my first research project, as the next section will show.

1.5 Sacred Values as Facilitators or Barriers in Decision Making

In my first research project, I aimed to address the question of whether, and under which conditions, sacred values play the role of facilitators or barriers in decision making, and to explore the link with negative emotions. More specifically, I aimed to show that certain decisions tapping into sacred values are experienced subjectively as quite straightforward and easy *even though* they evoke negative feelings, while others are seen as both difficult *and* negatively emotion-laden.

In line with my assumption, there is some evidence that choices on taboo values (i.e., sacred values) elicited negative emotions but were experienced as easy to solve and as not demanding extensive thought (Lichtenstein et al., 2007). This should be the case particularly when people are confronted with a taboo trade-off (i.e., a situation that pits a sacred value against a secular value; e.g., lives vs. money). Moreover, let us recall that, as Tetlock (2003) found, merely contemplating taboo trade-offs may embarrass decision makers and induce negative feelings of distress and disturbance. Thus, I believe that the mere fact of calling sacred values into question generally provokes negative emotions, because the decision maker may realize that something particularly important and highly delicate is at risk.

Taken together, unlike the research on emotional trade-off difficulty (e.g., Luce, 1998), Lichtenstein et al.'s (2007) and Tetlock's (2003) findings would imply that the experience of negative emotions is not necessarily equivalent to perceiving a certain choice as difficult. This should become clear when the concept of *trade-off type* is taken into account. As Tetlock et al. (2000) suggest, it is crucial to distinguish *taboo trade-offs* from *tragic trade-offs* as predictors for decision difficulty. We can recall here that taboo trade-offs are choice situations in which a sacred value is pitted against a non-sacred value (e.g., life against money), whereas tragic trade-offs are dilemmas which pit two sacred values against each other (e.g., life vs. another life). In their experiments, Tetlock et al. found first support for the notion that decision difficulty is strongly related to trade-off types. The authors provided their participants with either a taboo or a tragic trade-off vignette (as first independent variable). Each vignette described a resource allocation problem regarding an organ transplant in a hospital, where the hospital director, named Robert, was requested to make a decision. In the taboo trade-off condition, Robert had to decide whether to spend \$1,000,000 for a liver transplant in order to save the life of a boy, or to spend the same \$1,000,000 for various hospital equipment and salaries. In the tragic trade-off condition, Robert had to decide whether to save the life of the boy by a liver transplant or to save the life of another, equally sick boy by a liver transplant, when only one liver was available due to a shortage of organ donors. Just after depicting the choice problems, participants were informed about the ease and speed with which Robert made his choice (as second independent variable): Either Robert reported the choice as an easy one and was able to decide quickly, or he perceived the choice as very difficult and was only able to decide after extensive contemplation. Then, after reading this information, participants were asked to judge Robert's choice on several items.

As expected, the results yielded an interaction effect between the two factors trade-off type and decision difficulty on judgments. When Robert evaluated the taboo trade-off scenario as easy or the tragic trade-off scenario as difficult, he was judged positively by the participants. Conversely, when Robert evaluated the taboo trade-off scenario as difficult or the tragic trade-off scenario as easy, he was judged negatively by the participants. Although these results rely on judgments made from an observer

perspective, they yield first evidence about how trade-off types and decision difficulty are related. However, in my research, I explored this association in experiments in which participants are *themselves* in the role of the decision maker, being confronted with taboo trade-off, tragic trade-off, or routine trade-off scenarios.

1.5.1 Research Objectives

The main objective of this research was to examine the effects of sacred values and trade-off types on emotions and decision difficulty. I assumed that both negative emotions and perceived decision difficulty depend on sacred values and trade-off type. Moreover, according to the argument that mere contemplation of trade-offs involving sacred values may evoke negative emotions, which, however, are not necessarily equivalent to decision difficulty, I supposed that negative emotions and decision difficulty are interrelated in a non-linear fashion. Specifically, compared to routine trade-off scenarios (i.e., secular vs. secular value), scenarios involving a taboo trade-off were assumed to be more emotionally charged because the decision maker recognizes that with a sacred value, something important and delicate is at risk. Despite eliciting negative emotions, such a taboo trade-off scenario is assumed to be perceived as particularly easy and straightforward, because the involvement of just one sacred value may facilitate the choice in that it provides a strong reason for making the “right” decision. In other words, in taboo trade-off scenarios, sacred values may operate as *facilitators* of decision making. In contrast, tragic trade-off scenarios which enforce the violation of one sacred value are expected to be perceived as particularly difficult and highly negatively emotion-laden compared to taboo trade-off and routine trade-off scenarios. That is, in tragic trade-off scenarios, sacred values may represent *barriers* to decision making. The results, which largely support these considerations, have already been published (see Section 2; Hanselmann & Tanner, 2008). In short, this research confirms that sacred values may play the role of either a facilitator or a barrier in decision making, dependent on trade-off type. Moreover, it reveals that negative emotions may play an important role in choices involving sacred values.

1.5.2 Conclusion

The assumptions and findings of my first project imply that sacred values may operate as strong facilitators of decision making under specific circumstances when moral issues are at stake, but as barriers to decision making under other conditions. In this regard, the structure of the conflict at hand (i.e., trade-off type) is assumed to be a crucial moderator. However, up to now, it remains unclear which mechanisms may account for these effects. Specifically, I assume that the negative emotions, which are elicited when sacred values are at stake, may play a distinctive role. Hence, my second research project addressed this question by taking a closer look at affective and cognitive processes that are triggered when a person is confronted with decisions on sacred values. Before I introduce this research, the following section will provide several selected theories and findings which may be indicative for possible processes.

1.6 Mechanisms Underlying the Effects of Sacred Values

To illuminate how facilitation or barrier effects may occur, I will present selected theories and findings from different areas of research that may account for underlying mechanisms. Note that I do not claim to provide a complete model which explains precisely how sacred values work, but I assume that some of these approaches could be at least partially indicative for my research theses.

As previously mentioned, facilitation occurs especially in taboo trade-off scenarios in which sacred values provide a clear-cut solution for the choice problem at hand. In contrast, in tragic trade-off scenarios, in which sacred values compete against each other, they can no longer offer any help but may rather build up a barrier to reaching acceptable solutions. As I will argue in this section in more detail, this difference may be explained by distinct processes underlying the decision making process. Thereby, I refer to dual process accounts which distinguish, in general terms, a rather *rapid and automatic* from a rather *effortful and deliberative* system of information processing (e.g., Bargh & Chartrand, 1999; Chaiken & Trope, 1999; Epstein, 1994; Stanovich & West, 2000). In concrete terms, while the consideration of

taboo trade-off scenarios may trigger certain heuristic, intuitive, or affective processes, which result in a fast and easy decision, tragic trade-off scenarios may engage analytic or deliberative reasoning processes, which result in a difficult and effortful choice (see Mandel & Vartanian, 2007, for a similar argumentation). In the following, I will mainly provide approaches that account for presumable mechanisms which reflect the facilitation of decision making in taboo trade-off situations. After this, I will speculate on possible processes that could account for the effects of sacred values as barriers in tragic trade-off situations.

1.6.1 Mechanisms Reflecting Facilitation Effects

1.6.1.1 *Choice Rules and Heuristics*

As an ostensible explanation for facilitation in taboo trade-offs, decision makers who hold sacred values may adopt a certain decision strategy or choice rule when they perceive that sacred values are at stake. Specifically, since sacred values are associated with trade-off reluctance, a non-compensatory strategy such as a lexicographic choice rule may be triggered, which renders the application of trade-offs superfluous (Payne et al., 1993; see also Beattie & Barlas, 2001). As adopting such a choice rule would imply a selection among alternatives based on *just one* attribute, namely the most important one, all alternatives in the choice set which would assault the absoluteness and inviolability of the sacred value at hand would be eliminated from the outset. In other words, this strategy would facilitate the choice procedure by leaving out any forms of cognitively extensive trade-offs and comparisons.

In line with the view of non-compensatory rules as facilitators of decision making, sacred values and taboo trade-off scenarios may trigger a form of “one-reason decision making”, whereby information search is constrained to one particular cue (i.e., attribute), and choice alternatives are compared and selected with respect only to this cue (Gigerenzer, Todd, & the ABC Research Group, 1999). In other words, in the process of comparing choice alternatives, only the cue is considered which yields the best information about the consequences for the sacred value at hand, and subsequently,

the option providing the best value on that cue is chosen. Sacred values may thus reduce complexity in that they provide a sufficient reason for deciding in a certain way. More generally, such a decision strategy could be seen as a tool among “fast and frugal heuristics”, which are assumed to be adaptive, context-sensitive, and embedded in social environments (Gigerenzer, 2008; Gigerenzer et al., 1999).

It is important to emphasize that from this perspective, heuristics underlying moral decision making do not differ from those underlying other choices that are not morally tinged (Gigerenzer, 2008). More specifically, Gigerenzer argues that there are no specific “moral heuristics”; one and the same heuristic may steer both consumer choices (e.g., whether to buy newspaper A or newspaper B) and moral choices (e.g., whether or not to donate; whether or not to accept torture). As a consequence, this would imply that it should not make any difference from a subjective perspective whether a certain choice has to be made based on a cue like the topic of the cover story (e.g., when selecting newspapers) or the potential violation of human rights (e.g., when deciding on torture).

In sum, following the approach of heuristics and choice rules, sacred values may facilitate decision making in the sense of a general choice rule; they provide just one sufficient reason for deciding in a certain way and thereby reduce the complexity of the problem at hand. However, from my point of view, such a perspective largely neglects characteristic features of sacred values, which may have their own explanation power, as I will substantiate below.

1.6.1.2 Commitments to Act

In particular, explanations of how sacred values may facilitate decisions should additionally take into consideration the commitment power as a distinctive feature of sacred values. Research on the relation of sacred values to deontological, principled reasoning (i.e., behavioral rules in terms of prohibitions and obligations; e.g., Tanner, 2009; Tanner & Medin, 2004; Tanner et al., 2008) indicates that holding sacred values may be accompanied by strong commitments to act in a certain way. Thus, such

commitments may be expressed in both choices and actions, which serve to uphold the absolute status of the sacred values at hand.

In line with the commitment function of sacred values, the notion of moral mandates suggests that certain internalized beliefs about what is morally right or wrong allow the individual to act or to choose quickly in a “good” way. As mentioned, in a given situation, moral mandates may build up an emotion-driven moral conviction as a strong motivational force, which was found to predict choices and behavior more reliably than simple preferences and attitudes (Bauman & Skitka, 2009).

Interestingly, the notion of sacred values and their association with deontological principles has some affinity with the concept of “moral heuristics”, that is, simple rules of thumb based on certain beliefs, which operate as mental shortcuts providing easy and fast judgments and choices (Sunstein, 2005). To illustrate this, when faced with a decision involving sacred values, the moral heuristic “one should not trade money for lives” may be consulted in order to reach a quick choice. Obviously, unlike heuristics in Gigerenzer’s (2008) sense, moral heuristics are assumed to be specific principles applied selectively to moral problems.

Taken together, sacred values may facilitate decision making by engaging simple behavioral principles in terms of prohibitions or obligations, or by strong emotion-driven convictions to act or to choose in a certain “morally right” way. Importantly, these principles and convictions go beyond general heuristics in Gigerenzer’s (2008) sense, by providing not only *sufficient* but also *imperative* reasons to choose, in a manner that ultimately serves the protection of sacred values.

1.6.1.3 *Emotions as Signals*

Furthermore, to better comprehend facilitation effects, I deem it indispensable to incorporate the issue of strong emotional reactions when moral issues or sacred values are called into question (e.g., Skitka, 2002; Tetlock, 2003). In particular, I assume that such emotions are not so much a merely unpleasant by-product of choices; rather, they may operate both as guiding signals to the decision maker and as commitment devices

in moral self-regulation serving the protection of sacred values, thereby facilitating choices in which sacred values are at stake.

More precisely, emotions may operate as signals to the decision maker that with a sacred value, something particularly delicate and important is at risk that has to be defended. This assumption of emotions as signals has some affinity with the concept of *affect as information* (e.g., Schwarz & Clore, 1983, 1996) and with similar notions such as *risk as feelings* (e.g., Loewenstein, Weber, Hsee, & Welch, 2001), *affect heuristic* (e.g., Finucane, Alhakami, Slovic, & Johnson, 2000), or *somatic marker* (e.g., Damasio, 1994). All of these approaches have in common their emphasis on the power of affective influences on judgments and choices. Specifically, it is assumed that affective signals may provide information about the current status and value of objects or situations, and individuals attend to these feelings when making judgments or evaluations. A large body of empirical work has confirmed the role of affect as information, either focusing on general mood states (e.g., Pham, 1998; Schwarz & Clore, 1983), or addressing specific emotions such as fear, anger, or disgust (e.g., Bodenhausen, Shepard, & Kramer, 1994; Lerner & Keltner, 2000, 2001; Lerner, Small, & Loewenstein, 2004; Tiedens & Linton, 2001).

In terms of somatic markers, Damasio (1994) argued that the perception of one's own somatic state, including bodily sensations such as visceral reactions or changes in heartbeat, provide individuals with information about the current situation and potential outcomes when they are faced with value-relevant decisions. In several studies examining brain patients, Damasio and colleagues assume that the function to consult somatic reactions in particular is represented by brain activities in the ventromedial prefrontal cortex. For instance, the authors found lesions in this brain area to be especially associated with decreased experiences of emotions as reactions to threats of values, and with an impaired ability to make adaptive value-based decisions in various practical contexts (e.g., Bechara, Damasio, Damasio, & Anderson, 1994; Bechara, Damasio, Tranel, & Damasio, 1997; Bechara, Tranel, Damasio, & Damasio, 1996). In a similar vein, in an experiment using false physiological feedback, Batson, Engel, and Fridell (1999) were able to confirm that individuals consult their physiological state as

information about their reaction to a current situation when they are confronted with value-relevant decisions.

Overall, I assume that emotions elicited by the mere contemplation of choices involving sacred values may operate as signals in that they provide information on a potential threat to sacred values in a given situation, and help the decision maker to choose in a certain way to minimize this threat.

1.6.1.4 Moral Intuition

The idea of emotions as signals has also been picked up by intuitionist theories of moral judgment, which have recently seen an upsurge. As the most prominent example, the social intuitionist model of moral judgment (e.g., Haidt, 2001, 2007) proposes that moral judgments are mainly the result of quick and automatic “gut” feelings, rather than of extensive reasoning. In terms of common dual process models (e.g., Bargh & Chartrand, 1999; Chaiken & Trope, 1999), moral judgments are assumed to be based primarily on intuitive (i.e., quick, effortless, mostly affect-driven) rather than deliberative (i.e., slow, effortful, and analytical) processes. Moral intuition was defined as “the sudden appearance in consciousness of a moral judgment, including an affective valence (good – bad, like – dislike) without any conscious awareness of having gone through steps of searching, weighing evidence, or inferring a conclusion” (Haidt, 2001, p. 818). Thus, in this model, intuitive processes assert primacy. Deliberative processes of moral reasoning act mostly as post-hoc justifications for the judgment already generated; even though sometimes, reasoning processes may also be incorporated in forming judgments, for instance, through the fact that they override initial intuitions or search for a solution in the case of conflicting intuitions.

Moreover, theory and research suggest that intuitive “gut” responses are grounded in the experience of specific moral emotions such as disgust or anger (e.g., Rozin, Lowery, Imada, & Haidt, 1999; Schnall, Haidt, Clore, & Jordan, 2008; Wheatley & Haidt, 2005). Specifically, studies showed an increase in the severity of moral judgments among participants, which were previously induced with disgust, using

various methods of priming and physical exposure (Schnall et al., 2008) or hypnosis (Wheatley & Haidt, 2005).

Beyond this, the role of affective processes was further corroborated in neuroscientific studies, which focused on choice tasks comparable to taboo trade-off scenarios, either by assessing brain activities using functional magnetic resonance imaging (fMRI) (e.g., Greene & Haidt, 2002; Greene, Nystrom, Engell, Darley, & Cohen, 2004; Greene, Sommerville, Nystrom, Darley, & Cohen, 2001), or by examining patients with brain lesions (Koenigs, Young, Adolphs, Tranel, Cushman, Hauser, & Damasio, 2007). Altogether, these studies were able to demonstrate a selective involvement of brain areas associated with the processing of socio-emotional responses, such as, for instance, parts of the medial prefrontal cortex, which has previously been interpreted as a crucial area for the integration of (moral) emotions and somatic signals in decision making (e.g., Bechara et al., 1994; Damasio, 1994), or parts of the superior temporal sulcus as well as the posterior cingulum, which are known to be involved in various functions of social cognition (e.g., Greene & Haidt, 2002).

In sum, following the converging evidence regarding the role of intuitive-affective processes in moral decision making, sacred values and trade-off reluctance may mainly, or at least “by default”, operate on an intuitive and automatic level, as long as circumstances do not demand more extensive scrutiny of the problem at hand (e.g., dilemmas such as tragic trade-offs). In this vein, rapid “gut”-level responses may play a crucial role in signaling threats to sacred values and in rejecting trade-offs, thereby facilitating choices.

1.6.1.5 Moral Emotions as Commitment Devices

Beyond the signaling function of emotions, I assume that specific moral emotions may facilitate and guide decision making due to their *motivational* function, which serves to protect the sacred values at risk. In general, research on moral emotions distinguishes between “other-focused” emotions such as outrage and anger (i.e., responses are directed at other people) and “self-focused” emotions such as guilt and shame (i.e., responses addressing the self; e.g. Haidt, 2003; Tangney, Stuewig, &

Mashek, 2007). While “other-focused” emotions have already been highlighted as important regulators of interpersonal behavior in the context of *observed* violations of sacred values (see Section 1.2.2), it is still an open question whether “self-focused” emotions play a role as motivators of the protection of sacred values by the individual’s *own* acts and choices.

Guilt, for instance, is generally known as a crucial driving force for the intrapersonal regulation of moral behavior (e.g., Frank, 1988; Pfister & Böhm, 2008). More specifically, guilt feelings primarily arise in the context of social interactions and are elicited by an individual’s perception that he or she has transgressed moral or social norms and caused harm to another individual. Subsequently, this aversive affective state induces the individual to make up for the transgression and to restore the damage with the goal of reaffirming the relationship (e.g., Baumeister, Stillwell, & Heatherton, 1994).

Moreover, moral emotions have been assumed to play an important role precisely in social settings in which conflicts emerge between the self-interest of the members of a group and the interest of the group as a whole. In such situations, moral emotions are assumed to bring people to act in favor of the group’s interests. In the tradition of Adam Smith’s (1759) seminal theory of moral sentiments, Frank (1988) hypothesized that moral emotions (i.e., guilt in particular) may operate as motivators or “*commitment devices*” promoting cooperative behavior. Especially in social dilemmas such as public good problems, in which people are seduced to behave selfishly at the expense of long-term benefits and the group’s interests, guilt may help to overcome the attraction of immediate rewards and to prevent people from pursuing self-interest. As a consequence of its unpleasant character, guilt commits people to act beneficially for the group in the long run and thus motivates cooperation. Following these arguments, several studies confirmed an increase of cooperative behavior in sequential social dilemma tasks due to feelings of guilt which had been elicited after having committed selfish choices or by an experimental priming procedure (e.g., de Hooge, Zeelenberg, & Breugelmans, 2007; Ketelaar & Au, 2003).

In line with the conception of moral emotions as commitment devices, recent research on the mechanics of moral self-regulation suggests that guilt is primarily

associated with a prescriptive regulatory focus (i.e., focus on what one *should* do rather than on what one *should not* do). That is, guilt is sensitive to positive end-states and promotes moral conduct (e.g., helping, cooperation; Janoff-Bulman, Sheikh, & Hepp, 2009; Sheikh & Janoff-Bulman, 2010). Ultimately, such mechanisms of moral self-regulation may help to uphold central parts of one's moral identity (cf., for example, Aquino & Reed, 2002; Skitka, 2002).

In sum, following the findings on moral emotions as commitment devices and moral self-regulation, I believe that emotions elicited by the mere confrontation with choice scenarios involving sacred values may contain an additional commitment component that goes beyond the function of signaling potential threats to sacred values. Hence, moral emotions such as guilt may facilitate choices in that they insistently advise individuals to act and decide in a certain way, which enables the fulfillment and protection of sacred values.

1.6.1.6 Implicit Moral Beliefs and Preconscious Processing

Even though the aforementioned mechanisms primarily emphasize the role of affective and intuitive processes when considering taboo trade-off scenarios, this does not necessarily suggest that sacred values and trade-off reluctance operate generally and exclusively on an affective level. In fact, recent research suggests that both affective and cognitive dimensions may operate as distinct mechanisms behind the effects of sacred values. More specifically, the above-mentioned studies that examined distinct affective and cognitive contributors to the behavioral consequences of moral conviction indicate that the specific content of the cognitive belief regarding the issue under consideration (e.g., “this is something absolute and inviolable”) may be the primary mechanism behind effects on behavior (Wright et al., 2008). Additionally, the emotional intensity with which such beliefs are experienced when called into question substantially magnifies these effects. In other words, these findings insistently suggest that sacred values and taboo reactions are based on more than just a strong emotional component, and additionally involve a characteristic cognitive belief component (which is,

incidentally, also in line with the finding of dual factors regarding the sacred value construct, cf. Tanner et al., 2009).

Nonetheless, this dual view on sacred values does *not* imply that considering taboo trade-offs and facilitation through sacred values necessarily invokes a *conscious and intentional* application of choice rules and heuristics; rather, they may also be processed solely on a preconscious and automatic level. The theoretical and empirical evidence for this argument is twofold. On the one hand, in line with the recent schema accessibility approach to moral cognition and expertise (e.g., Lapsley & Hill, 2008; Lapsley & Narvaez, 2004; Narvaez & Lapsley, 2005), it is conceivable that beliefs associated with sacred values may be represented as an implicit, schematic, and chronic accessible form of moral knowledge which influences choices and behavior primarily on an “intuitive” (i.e., tacit, preconscious and automatic) level. It is noteworthy that such a view does not preclude that sacred values may also be stored in explicit and declarative forms of mental representation; but it is assumed that primarily implicit components guide choices and action (e.g., see Bargh & Chartrand, 1999, or Hogarth, 2001, regarding the predominant role of intuitive and automatic processes in decision making and social cognition).

On the other hand, according to the primacy-of-affect perspective (e.g., Zajonc, 1984; Zajonc & Markus, 1982) and, more similarly, to Haidt’s (2001) notion of moral intuition, it might be argued that sacred values and taboo trade-offs may simply predetermine the choice process on a preconscious level due to their affective power, irrespective of any cognitive belief component and prior to the deliberative consideration of any arguments.

To conclude, albeit rather speculatively, I suggest that scenarios involving taboo trade-offs trigger both affective processes (emotions as signals and commitment devices) and the processing of cognitive beliefs, which are represented in implicit knowledge structures. As a consequence, they may facilitate decision making in parallel primarily on a preconscious level, and probably predetermine choices before explicit forms of beliefs enter into consciousness.

1.6.2 Mechanisms Reflecting Barrier Effects

1.6.2.1 Parallel Affective and Deliberative Processes

Let us recall here that tragic trade-off scenarios involve conflicting sacred values. They confront individuals with troublesome and difficult requests to choose the lesser of two evils, or even to override the initial reluctance of trade-offs and to sacrifice one of the two sacred values. Thus, sacred values can no longer operate as a facilitator, but rather form a barrier to an acceptable choice.

In terms of dual process accounts (e.g., Chaiken & Trope, 1999), I assume that tragic trade-off scenarios may simultaneously trigger both affective and deliberative processes. Affective processes may reflect similar mechanisms to those triggered in taboo trade-off scenarios (i.e., initial emotions or intuitions signaling in particular acute threats to sacred values), and additionally considerable forms of emotional stress, since the initial intuitions may conflict with each other and fail to lead to an acceptable solution. Hence, I assume that deliberative reasoning processes are elicited in addition to affective processes, which should help to overcome this barrier and to resolve the dilemma at hand. The existing literature offers at least some possible evidence for such an interpretation. In concrete terms, the recruitment of deliberative processes is in accordance with findings from decision making research, showing that choices between two similarly attractive and highly valued options trigger negative emotions, engage extensive, vigilant and information-acquisitive processing, and increase the probability of decision avoidance (e.g., Dhar, 1997; Luce, 1998; Luce et al., 1997).

Importantly, the idea of simultaneous affective as well as reasoning processes does not necessarily contradict the approach of moral intuition. In actual fact, Haidt's (2001) intuitionist model acknowledges that in some situations, moral judgments are not only based on affect-driven intuitions but also on deliberative reasoning processes, and assumes this to be specifically the case in situations in which multiple intuitive inputs conflict with each other (i.e., similar to tragic trade-offs). Haidt argues that an abortion, for example, may feel wrong to many people when their perspective is on the fetus but right when their focus is on the woman. In such situations, reasoning processes are

proposed to be triggered in order to build up imaginative cases as a support for each point of view, and thus to search for further evidence in addition to initial intuitions.

1.6.2.2 Cognitive Neuroscience Research on Dual Processes

Moreover, findings from brain imaging studies lent support to the assumption of simultaneous affective and deliberative processes, especially in cases of difficult moral dilemmas comparable to tragic trade-off scenarios (Greene et al., 2004). Specifically, such scenarios were associated with particularly long decision times and triggered activities in brain areas associated with abstract reasoning and utilitarian judgments (e.g., the dorsolateral prefrontal cortex) and detection of cognitive conflicts (e.g., the anterior cingulate cortex), in addition to areas which are related to emotion-related processing (e.g., the insula, which is assumed to serve the processing of feelings of disgust; and other areas which show activities in tasks comparable to taboo trade-offs, as mentioned previously). In other words, this pattern of simultaneous activities in “affective” and “cognitive” brain areas, together with activities indicating cognitive conflict, strongly suggests a selective involvement of competing mechanisms serving moral judgments and choices, and processes which are recruited to resolve troublesome moral dilemmas comparable to tragic trade-offs.

1.6.3 Conclusion

This section presented several theoretical and empirical approaches that might account for mechanisms behind the effects of sacred values in decision making. First, sacred values may trigger non-compensatory choice rules and heuristics in that they provide a sufficient reason for making choices. Second, research suggests that sacred values are associated with a commitment component, which provides an imperative reason to choose easily in a “morally good” way. Third, converging evidence from different fields of research suggests that emotions, elicited by merely contemplating taboo trade-offs, may operate both as signals to the decision maker that sacred values are at risk, and as commitment devices in moral self-regulation processes serving the

protection of sacred values, thereby facilitating choices. Fourth, choices involving taboo trade-offs may trigger rather intuitive and automatic processes which facilitates decision making, whereas tragic trade-offs may engage deliberative and effortful processes which hinder the choice process. Finally, it is important to note that rapid and automatic mechanisms underlying facilitation effects can be explained by either purely affective processing (cf. moral intuition, primacy-of-affect) or by preconscious processing of certain beliefs as implicit forms of moral knowledge (cf. schema accessibility). However, it is also conceivable that facilitation occurs by both affective processes and preconscious processing of moral beliefs. In the following, I will introduce my second research project, which picked up several parts of the above-mentioned approaches in order to explore the mechanisms underlying the effects of sacred values in decision making.

1.7 Cognitive and Affective Indicators for Conflict and Self-Regulation Processes

The goal of my second research project was to address more thoroughly the role of sacred values as facilitators or barriers in decision making, and to take a closer look at possible mechanisms behind these effects. Let us recall that the subjective ease or difficulty of deciding on issues which individuals deem as concerning sacred values crucially depends on features of the task structure at hand (i.e., trade-off type). That is, subjective experiences of decision difficulty are dependent on whether individuals perceive just one (i.e., taboo trade-off) or two conflicting sacred values (i.e., tragic trade-off) associated with the choice. Hence, as I argued, sacred values may facilitate decision making by triggering rather intuitive and affective processes in the case of a taboo trade-off situation, but may hinder it by engaging deliberative and particularly effortful processes in a tragic trade-off situation.

To better understand the mechanisms behind such effects, my intention for this research was to capture more closely intrapersonal conflict and self-regulation processes which individuals undergo when faced with taboo and tragic trade-off scenarios. To this aim, several cognitive and affective variables as indicators for intrapersonal processes were selected for examination. My focus was on experienced ambivalence as a measure

of cognitive conflict, on emotional stress as a general measure of perceived burden, and on the emotions fear and guilt to prove specifically the assumed roles of emotions as signals and commitment devices.

The taboo and tragic trade-off scenarios that were presented in this research addressed human rights as sacred values in the question of whether or not suspects should be tortured to gain important information.

1.7.1 Research Objectives

Whereas the first research project assessed the perceptions of choice difficulty as a rather global and distal measure of whether sacred values facilitate or hinder decision making, the second project aimed to capture more narrowly the perceptions of cognitive conflict resulting from distinct trade-off types (cf. Mandel & Vartanian, 2007). More specifically, my research used a measure of experienced ambivalence as a cognitive indicator of decisional conflict. Experienced ambivalence has been defined as reflecting the simultaneous existence of positive and negative beliefs or emotions with regard to the same object (Jonas, Broemer, & Diehl, 2000a).

Of course, decision makers often have to deal with contradicting beliefs or arguments, which reflect the perception of simultaneous pros and cons for each choice alternative that have to be traded off against each other. Imagine, for instance, a car purchase scenario in which a buyer has to decide between car A and B. Car A provides the better motor performance, whereas car B provides the better styling. When faced with this choice, a buyer may experience ambivalence to the extent that both aspects (i.e., performance and styling) are similarly important to him. As long as these aspects do not represent sacred values, they might constitute a routine trade-off.

However, in terms of taboo versus tragic trade-off scenarios, arguments or beliefs reflect either one (in the case of taboo trade-offs) or two competing sacred values (in the case of tragic trade-offs), which, in turn, may reduce or increase ambivalence, respectively. To specify these effects, imagine the following two choice scenarios regarding the application of torture to force information from a suspect. The taboo trade-off scenario raises the question of whether or not torture should be allowed in

return for money (i.e., getting information about the whereabouts of a money haul in a robbery case). Implicitly, this scenario pits the contradicting beliefs “torturing the suspect violates human rights” against “torturing the suspect may help to get the money back”. In contrast, the tragic trade-off scenario raises the question of whether or not torture should be allowed in order to force information to be revealed about a live time bomb in a crowded location. Implicitly, this scenario pits the contradicting arguments “torturing the suspect violates human rights” against “torturing the suspect may help to save innocent lives”.

Hence, my assumptions with respect to ambivalence were as follows: In the taboo trade-off scenario, individuals who endorse human rights and the prohibition of torture as a sacred value may experience less ambivalence compared to other people who do not endorse it as a sacred value, because they benefit from relying on an absolute principle, which helps them to override the contradicting “monetary” argument or even to weaken or disable its influence due to trade-off reluctance. This, in turn, should facilitate the choice process. In contrast, in the tragic trade-off scenario, individuals may associate both beliefs with sacred values, which increases experienced ambivalence and, in turn, hinders the choice process because both arguments are deemed as absolute and mandatory.

Beyond addressing experienced ambivalence as a cognitive indicator of choice conflict, my research explored affective conflict and self-regulation parameters such as emotional stress, fear, and guilt. Emotional stress may generally reflect perceived burden and the extent to which people struggle with the conflict at hand. Moreover, the specific emotions fear and guilt may represent indicators of the presumed signaling and commitment functions of emotions in choices on sacred values. Fear may play the role of a signal and information to the individual that something particularly relevant and delicate is at risk (e.g., Damasio, 1994; Finucane et al., 2000; Schwarz & Clore, 1996), and guilt may operate as a commitment device, promoting and obligating the decision maker to act in a manner that reaffirms the status of the sacred values at hand (e.g., Frank, 1988; Sheikh & Janoff-Bulman, 2010).

Generally speaking, I expected that individuals with higher levels of sacred value endorsement should show larger differences between taboo and tragic trade-off

scenarios in emotional stress, fear, and guilt than people with lower levels, because for the former, different prospects to succeed or fail in protecting their sacred values have largely different intrapersonal implications. Hence, in terms of facilitation, I expected taboo trade-off scenarios to lead to less stress, fear, and guilt for people with higher levels of sacred value endorsement compared to those with lower levels. Conversely, in terms of barriers, I assumed for tragic trade-off scenarios that people with higher levels of sacred value endorsement should feel more stress, fear, and guilt than those with lower levels. Altogether, these emotions might be initial indicators of possible mechanisms behind the facilitation and barrier effects of sacred values in that they reflect specific characteristics of sacred values that go beyond the mere preference for important values or attitudes. The results of this research, which mostly support the assumptions, have recently been submitted for publication (see Section 3; Hanselmann, Tanner, & Duc, 2010).

1.7.2 Conclusion

The goal of my second research project was to take a closer look at intrapersonal processes which individuals undergo when they are confronted with taboo and tragic trade-off choices on the issue of torture. Specifically, my research explored cognitive and affective indicators for conflict and self-regulation processes such as experienced ambivalence, emotional stress, fear, and guilt. In doing so, I expected to gain initial insights into the mechanisms behind the effects of sacred values as facilitators or barriers in decision making.

2. Manuscript Hanselmann & Tanner (2008)

Running head: SACRED VALUES, DECISION DIFFICULTY, AND EMOTIONS

Taboos and conflicts in decision making: Sacred values, decision difficulty, and
emotions

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Abstract

Previous studies suggest that choices are perceived as difficult as well as negatively emotion-laden when they tap into moral considerations. However, we propose that the involvement of moral issues and values can also facilitate decisions because people often insistently preclude them from trade-offs with other values. Because such values are treated as inviolable and absolute, they are called sacred values (e.g., Tetlock et al., 2000). Two experiments examined the influence of sacred values (measured by a recent self-report scale) and variation of trade-off type (taboo, tragic, routine trade-offs) on perceived decision difficulty and negative emotions. As hypothesized, decision difficulty and negative emotions show diverging patterns as a function of sacred values and trade-off types. When the decision situation involved two conflicting sacred values (i.e., tragic trade-off), people perceived the decision task as emotionally stressful and difficult. However, when the decision situation was associated with only one sacred value (i.e., taboo trade-off), people perceived the task as more negatively emotion-laden, but as easier to solve, compared to a situation not involving sacred values (i.e., routine trade-off). These findings suggest that reliance on sacred values may work as a heuristic.

Keywords: Sacred values, protected values, taboo, decision making, decision difficulty, emotion, morality

Taboos and conflicts in decision making: Sacred values, decision difficulty, and emotions

Most normative theories of decision making view it as a process that requires trade-offs between values. A trade-off means compensating for a disadvantage on one value with a benefit on some other value (e.g., Keeney & Raiffa, 1976; von Neumann & Morgenstern, 1947). For example, the choice between two job offers may imply a trade-off between salary and traveling distance to work. According to normative theories, any types of values or attributes can be traded off, in order to arrive at a choice that maximizes subjective utility.

Decision making research, however, has rejected this relatively simplistic view (e.g., Payne, Bettman, & Johnson, 1993). Decision tasks are sometimes perceived as difficult, negatively emotion-laden and distressing, and that people often avoid making decisions (e.g., Anderson, 2003; Luce, 1998; Payne et al., 1993). We know from personal experience that choices differ greatly in their difficulty and emotional charge. For example, imagine two managers of global companies who are faced with rather different decision problems. One manager is faced with the problem of whether to improve the poor working conditions for which the company has been criticized by a human rights organization, or to invest in new production facilities in order to improve competitive capacity. The other manager has to decide whether to improve the poor working conditions for which the company has been criticized by a human rights organization, or to solve the company's widely criticized severe environmental pollution issues.

Comparing these choices – improved working conditions versus competitive capacity on the one hand, and improved working conditions versus environmental issues on the other – we believe that they vary in perceived decision difficulty and emotional charge. Both decisions may tap into moral or ethical considerations (such as human health, environmental protection), but they may differ in terms of how the choice options relate to moral values. In the first decision problem, just one option may be related to a moral value (i.e., safety at work), whereas the second decision problem may involve two conflicting moral values (i.e., safety at work vs. environmental protection). In general, we believe that a decision problem will be perceived as easier if people consider moral aspects for one but not the other option. More specifically, we argue that decisions become easier when one of the options reflects *sacred values*. As we will describe later in more detail, sacred values are values that are seen as absolute and thus protected from trade-offs with other values because they tap into moral or ethical principles. In contrast, a decision problem should be perceived as much more difficult and emotionally distressing if both options reflect sacred values. Such situations imply the necessity of trading off two moral values and, therefore, of sacrificing one of the values. Traditional normative views of decision making do not take into account such differences. They presume that people solve both decision problems in an equally rational and unemotional manner, and that people are able to make trade-offs among any conflicting values.

In this paper, we focus on decision problems involving moral considerations, and we attempt to specify the effects of sacred values on decision difficulty and emotions. We define decision difficulty as the level of perceived difficulty or ease of

selecting among choice options. Previous studies have identified a plenty of factors that affect decision difficulty (for a review, see Anderson, 2003). For instance, some research suggests that decision difficulty may depend on the extent to which choices contain attributes that are difficult to *trade off*. This is the case, for instance, when trade-offs pertain to attributes that are associated with valued goals or potentially threatening consequences (e.g., the trade-off between safety and price attributes when buying a car). Luce and colleagues (Luce, 1998; Luce, Bettman, & Payne, 1997; Luce, Payne, & Bettman, 1999) have shown that difficult trade-offs elicited higher levels of negative emotions and stronger tendencies to avoid such trade-offs. Hence, the level of negative emotions reflects the degree of trade-off difficulty. Although it has not been measured explicitly, it is plausible to assume that difficult and negatively emotion-laden trade-offs may also increase perceived decision difficulty. Note that this would suggest a positive relationship between negative emotions and decision difficulty. In other words, choices eliciting negative emotions should also be perceived as difficult.

In the current study, however, we attempt to show that certain decisions are perceived as quite easy and straightforward even though they elicit negative emotions. We assume that this is particularly pronounced when decisions involve moral or ethical considerations. Compared to everyday choices (e.g., whether to buy newspaper A or B), decisions involving moral considerations are very likely to be more distressing and disturbing, probably since the decision-maker realizes that something particularly important and delicate is at stake.

Sacred values and trade-off types

The concept of *sacred values* (or *protected values*) was developed to express the idea that certain values and moral principles are seen as absolute and non-negotiable and thus are protected from trade-offs with other values (Baron & Spranca, 1997; Tanner & Medin, 2004; Tanner, Ryf, & Hanselmann, 2007; Tetlock, Kristel, Elson, Lerner, & Green, 2000). A sacred value has been defined as “any value that a moral community implicitly or explicitly treats as possessing infinite or transcendental significance that precludes comparisons, trade-offs, or indeed any other mingling with bounded or secular values” (Tetlock et al., 2000, p. 853). Values like human life, health, nature, love, honor, justice, or human rights are seen as absolute and inviolable – in effect sacred. Trading them off against secular values (e.g., money) is considered taboo. For instance, previous research has shown that people struggle to protect sacred values from trade-offs against other values and respond with strong moral outrage when faced with violations of such taboo trade-offs. Moreover, it has been suggested that even the mere contemplation of taboo trade-offs elicits strong negative feelings of distress and disturbance (Tetlock, 2003).

The aim of the present research is to examine the effects of sacred values on decision difficulty and emotions. More specifically, we study the effects of the following three distinct *trade-off types* on decision difficulty and emotions: *Taboo trade-offs* (i.e., a situation that pits a sacred value against a secular value), *tragic trade-offs* (i.e., a situation that pits two sacred values against each other) and *routine trade-offs* (i.e., a situation that pits two secular values against each other). Tetlock et al. (2000) indicated that such trade-off types and decision difficulty are closely related. The

authors examined how participants judged *another person* who was faced with a taboo or a tragic trade-off situation and who reported the task to be easy or difficult. The authors found that decision-makers who evaluated taboo trade-off decisions as easy and tragic trade-off decisions as difficult were judged positively by the participants. However, decision-makers who evaluated taboo trade-off decisions as difficult and tragic trade-off decisions as easy were judged negatively. It is important to note that these findings rely on judgments made from an observer perspective. Our research will study relations between trade-off types and decision difficulty when participants are *themselves* in the role of the decision-maker.

We hypothesize that decision difficulty and negative emotions vary as a function of sacred values and trade-off type, and that decision difficulty and negative emotions are associated in a non-linear fashion. Specifically, compared to routine trade-offs, we expect taboo trade-offs to be more negatively emotion-laden, because the decision maker may realize that sacred values are involved and something important and delicate is at stake. Despite provoking negative emotions, we suppose that the involvement of just one sacred value in taboo trade-offs will help to make decisions easier. Conversely, we expect decision situations that imply the necessity of trading off two sacred values and sacrificing one of them (tragic trade-offs) to be associated with higher levels of negative emotions and decision difficulty, compared to the other conditions.

Overview of experiments

We report two experiments that examined how sacred values and manipulation of trade-off types affect decision difficulty and negative emotions. In both experiments,

participants were provided with decision scenarios that refer to hot issues as well as everyday decisions, such as poor working conditions, flood protection, or job selection. Each experiment includes a manipulation of trade-off type (i.e., taboo vs. tragic vs. routine trade-off scenarios), and each scenario provides a choice between two options.

As an important manipulation check, we examine the extent to which participants associate sacred values with the choice options and whether trade-off types really correspond with sacred value endorsements. To assess people's endorsement of sacred values, we utilize the recently developed *Sacred Values Measure* (SVM; Tanner et al., 2007). In Experiment 1, a previous version of the instrument is used, whereas Experiment 2 contains the improved final version (see Appendix B). This scale was designed to tap into important features of sacred values (e.g., unwillingness to sacrifice a value, incommensurability, trade-off resistance). Participants are provided with several items and asked to indicate the extent of their agreement on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

The SVM was shown to have good internal consistency in several studies, yielding α 's higher than .79 (Tanner et al., 2007). In terms of construct validity, the scale was compared with measures of moral outrage (e.g., Tetlock et al., 2000) and attitude strength (e.g., Pomerantz, Chaiken, & Tordesillas, 1995). Although the moral outrage items represent a more "indirect" approach to sacred values (i.e., people's reactions to observed violations of sacred values are assessed), the SVM is designed to measure essential features of sacred values in a more "direct" manner. The studies revealed that moral outrage measures and our sacred values measure represent conceptually distinct factors, even though they are highly correlated ($rs > .76$).

Furthermore, we found evidence in several studies that sacred values differ conceptually from strong attitudes. As our focus in the current research lies on the decision-maker's perspective rather than the observer's perspective, sacred value measurement by the SVM seems to be more appropriate than the moral outrage approach.

In both experiments, the primary dependent variables were perceived decision difficulty and negative emotions. Decision difficulty was measured by a single item (Experiment 1) or by a short set of items regarding various aspects of decision difficulty (Experiment 2). Negative emotions were also assessed using various approaches. In Experiment 1, we present a set of five items focusing on emotional stress. In Experiment 2, we utilize the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988).

Experiment 1

Experiment 1 examines how sacred values and trade-off type are related to decision difficulty and negative emotions. As outlined in the introduction, we hypothesize that decision difficulty and negative emotions are associated in a non-linear fashion, depending on trade-off type. We call the three types: taboo, meaning that *one* of the values is sacred; tragic, meaning that both are sacred; and routine, meaning that neither value is sacred.

Method

Participants and design. A sample of 84 students from the University of Zurich (65 women, 19 men) completed a paper-and-pencil questionnaire that contained three

decision scenarios. Participants' ages ranged from 18 to 63 years ($M = 25.39$). They were recruited by advertisements in several study courses. In return for their participation, respondents were given the opportunity to take part in a prize draw.

Participants were provided with one of two different scenario combinations, each consisting of a taboo, a tragic, and a routine trade-off scenario. Therefore, the design was a 3 (trade-off type: taboo vs. tragic vs. routine) X 2 (scenario combination: A vs. B) factorial design with trade-off type as within-subject factor and scenario combination as between-subject factor. Participants were randomly assigned to one of the two between-subject conditions. Dependent variables were sacred value endorsements, negative emotions, decision, and decision difficulty.

Materials and procedure. Subjects were tested in small groups containing a maximum of five persons. Materials were written in German. Each participant was presented with three scenarios, representing a taboo, a tragic or a routine trade-off, that were selected from a total set of five scenarios.

This set of scenarios involved three different topics (i.e., "flood protection", "safety at work", and "job offer"), based upon which two taboo trade-off scenarios, two tragic trade-off scenarios, and one routine trade-off scenario were constructed. In order to ensure that each participant received a taboo and a tragic trade-off scenario dealing with different topics, two scenario combinations were utilized as between-subject factor. More precisely, participants assigned to scenario combination A received the topic "flood protection" as the taboo, "safety at work" as the tragic, and "job offer" as the routine trade-off scenario, whereas those assigned to scenario combination B received the topic "safety at work" as the taboo, "flood protection" as the tragic, and "job offer"

as the routine trade-off scenario. Within each scenario combination, scenarios were presented in an order randomized for each subject.

Each scenario provided a choice between two options. For instance, the taboo trade-off scenario with the topic “flood protection” was as follows (for a description of the other scenarios and tasks, see Appendix A).

Imagine that you are the president of the local authority of a village that has been severely affected by a flood. The local authority is discussing whether to invest a considerable amount of the annual budget in improved flood protection measures. In this case, however, the village would have to forego a planned facelift for the village square. As president, you have to decide between the improvements in flood protection (option 1) and the facelift for the village square (option 2).

After presenting the scenario, participants were asked to respond to a previous version of the SVM consisting of 4 items ($\alpha = .66$) (see Appendix B). This was done for each option separately. A set of 5 questions was then provided to assess negative emotions associated with the decision situation ($\alpha = .89$; see Appendix B). These items were adapted following Luce et al. (1999) and Gaab, Rohleder, Nater, and Ehlert (2005). Participants were asked to indicate their agreement on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (e.g., “I am swamped with this decision”). After that, they had to make a choice between these two alternatives on a 7-point scale ranging from 1 (*clearly in favor of option 1*) to 7 (*clearly in favor of option 2*). Finally, participants were given one item to indicate the perceived decision difficulty on a 7-point scale ranging from 1 (*very easy*) to 7 (*very difficult*).

Results and discussion

One participant was excluded from analyses because of missing data. Table 1 shows scale means and standard deviations for sacred value endorsements, decision, perceived decision difficulty, and negative emotions, listed for each scenario. Decision responses were not further analyzed as they are not of primary interest with regard to our hypotheses.

Table 1

Scale means (standard deviations) for sacred value endorsements, decision, decision difficulty, and negative emotions, for each scenario (n = 83)

Scenario	Sacred value ^a		Decision ^b	Difficulty ^c	Neg. emot. ^d
	Option 1	Option 2			
Taboo trade-offs					
Flood protection	4.77 (1.24)	3.14 (1.07)	1.26 (0.59)	1.83 (0.94)	2.58 (0.81)
Safety at work	4.93 (1.40)	3.09 (0.81)	1.59 (0.87)	2.85 (1.57)	3.98 (1.30)
Tragic trade-offs					
Flood protection	3.73 (0.94)	4.11 (1.01)	3.71 (1.71)	4.98 (1.67)	4.37 (1.39)
Safety at work	4.53 (1.29)	4.00 (1.19)	2.79 (1.35)	5.52 (1.47)	5.13 (1.31)
Routine trade-off					
Job offer	3.03 (0.77)	3.92 (1.23)	5.27 (1.87)	2.89 (1.65)	2.90 (1.20)

Note. All ratings were made on 7-point scales. ^aThe higher the scores, the higher the sacred value endorsements. ^bThe lower the score, the stronger the preference for option 1. ^cThe higher the score, the higher the level of perceived decision difficulty. ^dThe higher the score, the higher the level of negative emotions.

As a manipulation check, we first examined whether trade-off types corresponded with endorsements of sacred values (SVM). These endorsements were analyzed with a mixed model ANOVA (trade-off type X option X scenario combination), with trade-off type and option as within-subject factors and scenario

combination as between-subject factor. The trade-off type X option interaction was significant, $F(2, 162) = 80.95, p < .001$. This interaction effect was analyzed by computing simple main effects for both trade-off type and option. Table 2 shows the main results revealed by Bonferroni-adjusted pairwise comparisons. Significant simple main effects of trade-off type were found for options 1 and 2, $F_s(2, 80) > 29.71, ps < .001$. Furthermore, options differed from each other in the taboo trade-off condition, $F(1, 81) = 104.05, p < .001$, to a lesser extent in the routine trade-off condition, $F(1, 81) = 50.30, p < .001$, but not in the tragic trade-off condition, $F(1, 81) = 0.30, p = .586$. Importantly, the results confirm that the (objective) manipulation of trade-off types corresponded with the (subjective) sacred value endorsements. In other words, people were likely to associate only one option with sacred values in taboo trade-off scenarios and both options in tragic trade-off scenarios. Contrary to our expectations, the endorsement for option 2 was somewhat higher for the routine trade-off scenario, indicating that the underlying issue also tapped into a sacred value.

Table 2

Scale means (standard deviations) for sacred value endorsements as a function of trade-off type and option (n = 83)

	Sacred value		
	Taboo	Tragic	Routine
Option 1	_a 4.85 _x (1.31)	_b 4.13 _x (1.19)	_c 3.03 _x (0.77)
Option 2	_a 3.11 _y (0.94)	_b 4.06 _x (1.10)	_b 3.92 _y (1.23)

Note. Within a row, cell means with different subscripts (a, b, c) differ significantly at $p < .001$ in Bonferroni-adjusted pairwise comparisons. Within a column, cell means with different subscripts (x, y) differ significantly at $p < .001$ in Bonferroni-adjusted pairwise comparisons.

Next, we tested our hypothesis that decision difficulty and negative emotions vary as a function of trade-off type. A MANOVA was conducted to examine the effects of trade-off types on decision difficulty and negative emotions. Significant effects were further analyzed by Bonferroni-adjusted pairwise comparisons. Most importantly, the findings provide support for the hypothesis that decision difficulty and negative emotions vary as a function of trade-off type, Wilks' $\Lambda = .23$, $F(4, 78) = 66.35$, $p < .001$. For decision difficulty, a significant main effect of trade-off type emerged, $F(2, 162) = 94.42$, $p < .001$. Compared to the routine trade-off condition ($M = 2.89$), the decision was perceived as easier in the taboo trade-off condition ($M = 2.34$), and as considerably more difficult in the tragic trade-off condition ($M = 5.25$). Pairwise comparisons showed that all mean differences with regard to decision difficulty were significant ($ps < .05$). Additionally, in line with our expectations, we found a significant main effect for negative emotions, $F(2, 162) = 91.31$, $p < .001$. Compared to the routine trade-off condition ($M = 2.90$), participants felt slightly more negative in the taboo trade-off condition ($M = 3.28$) and considerably more negative in the tragic trade-off condition ($M = 4.75$). Pairwise comparisons yielded significant mean differences ($ps < .05$).

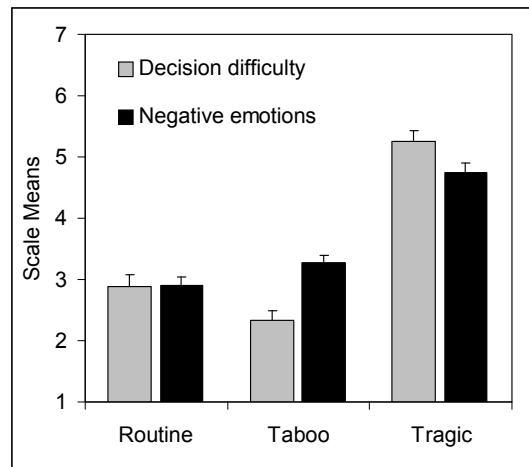


Figure 1. Scale means (+ SE) for decision difficulty and negative emotions as a function of trade-off type ($n = 83$).

As can be seen in Figure 1, taboo trade-offs were perceived as easier compared to routine trade-offs, while tragic trade-offs were perceived as most difficult. Negative emotions also showed the expected pattern, though the scores reflected in general only moderate levels of emotions. Compared to routine trade-off scenarios, negative emotions were somewhat stronger in taboo trade-off scenarios and considerably stronger in tragic trade-off scenarios. Altogether, the findings lend initial support to the proposition that perceived decision difficulty and negative emotions vary as a function of trade-off types (and indirectly also as a function of sacred value endorsements).

Experiment 2

Experiment 2 aimed to replicate previous findings by addressing four possibly critical points. First, we wished to improve the measure for decision difficulty by using multiple items instead of a single item. Second, with regard to negative emotions, we wished to replicate our findings using the PANAS scale (Watson et al., 1988), a well-

established and validated instrument. Third, in order to strengthen the manipulation of trade-off type, we slightly modified the content of some scenarios. Fourth, we wanted to ensure that the measurement of sacred value of option 1 and 2 is not influenced by any direct trade-offs among these options. We therefore improved our design to uncouple sacred value assessments from the subsequent trade-off and choice processes.

Method

Participants and design. A sample of 130 students from the University of Zurich (90 women, 40 men) completed an online questionnaire that contained two hypothetical decision scenarios. Subjects' ages ranged from 18 to 46 years ($M = 24.37$). They were recruited by advertisements via e-mail. In return for their participation, respondents obtained course credit points and were given the opportunity to take part in a prize draw.

Two different scenario combinations, each consisting of a taboo, a tragic, and a routine trade-off scenario, were utilized. In each combination, the scenarios varied in topic. Participants were randomly assigned to one of the two scenario combinations. From this combination, participants were provided with only two of the three trade-off types, which were also randomly selected. For our analyses, we extracted a trade-off type variable (i.e., taboo vs. tragic vs. routine trade-off) based on these combinations. Thus, trade-off type and scenario combination were used as independent variables. The dependent variables were sacred value endorsements, negative emotions, decision difficulty, and decision.

Materials and procedure. Materials were written in German. Again, a total set of five scenarios was utilized. This set involved the same three topics as in Experiment 1 (i.e., “flood protection”, “safety at work”, and “job offer”), based upon which two taboo scenarios, two tragic scenarios, and one routine trade-off scenario were constructed. In order to ensure that each participant received two scenarios representing two different trade-off types as well as two different topics, two scenario combinations were used. More precisely, scenario combination A included the topic “flood protection” as the taboo, “safety at work” as the tragic, and “job offer” as the routine trade-off scenario, whereas scenario combination B included the topic “safety at work” as the taboo, “flood protection” as the tragic, and “job offer” as the routine trade-off scenario. As mentioned above, participants were randomly assigned to one of these two scenario combinations, and were presented with only two of three trade-off types, which were randomly selected from the respective scenario combination.

The description of the choice options referring to some scenarios was slightly modified. In particular, we tried to improve the routine trade-off scenario, making it less likely to be associated with sacred values (for a description of scenarios, see Appendix A). Furthermore, different from the previous study, the choice options were presented sequentially (rather than simultaneously), and sacred value endorsements for each option were assessed before any trade-off task was salient to the participant. Note that the order of the options was randomly selected throughout the experiment, and that the instructions as well as the descriptions of the scenarios were adjusted accordingly. An example of the procedure is the following (tragic trade-off dealing with conflicting

issues “safety at work” vs. “environmental protection”; see Appendix A for a description of the other scenarios).

Imagine that you are the CEO of a global company that has been criticized for poor working conditions in a Chinese factory. You are attending a meeting of the management. There is a discussion of whether measures to improve safety at work should be taken. You now have to consider your position on improving safety at work, because there will be a vote at the end of the meeting.

Participants were then given the final version of the SVM (5 items, $\alpha = .81$; see Appendix B for items) to assess the extent to which “safety at work” was associated with sacred values. After completing this task, participants were provided with the continuation of the scenario and the second option.

Before the final vote, further topics are discussed. Your company has come under fire because large amounts of waste and pollutants are being discharged by the factories. There is a discussion about whether measures for environmental protection should be taken. You should now consider your position on environmental protection, because there will be a vote at the end of the meeting.

Again, respondents were given the SVM, this time to examine the extent to which “environmental protection” was associated with sacred values. Finally, the decision task was introduced and participants were asked to make a choice between options 1 and 2.

This is the end of the meeting, and both suggestions, investing in safety at work and in environmental protection, have been approved. Because the implementation of both projects would exceed the available budget, you as CEO have to make the final choice between investing in safety at work (option 1) and investing in environmental protection (option 2).

After being presented with the final decision situation, participants were given the PANAS (20 items) to measure positive and negative emotions associated with the decision situation (Watson et al., 1988; German translation by Krohne, Egloff, Kohlmann, & Tausch, 1996; see Appendix B). Participants were asked to indicate their feelings on 5-point scales ranging from 1 (*very slightly or not at all*) to 5 (*extremely*) (e.g., “afraid”, “jittery”). The positive emotion items were also included, although we only used the negative emotion items in this study ($\alpha = .90$ for negative emotions subscale).

Perceived decision difficulty was assessed using 5 items ($\alpha = .89$), designed to measure various aspects of decision difficulty (such as ambivalence, certainty of decision, readiness to decide, or need for additional time). People are asked to indicate their extent of agreement on 7-point scales ranging from 1 (*very easy*) to 7 (*very difficult*) or from 1 (*strongly disagree*) to 7 (*strongly agree*) (e.g., “I feel very ambivalent about this decision”) (see Appendix B).

Finally, they indicated their decision on a 7-point scale ranging from 1 (*clearly in favor of option 1*) to 7 (*clearly in favor of option 2*).

Results and discussion

Data collection yielded a total of 260 scenarios, completed by 130 subjects. Due to failures in data transfer, 37 scenarios had to be excluded. Therefore, data analyses are based upon the remaining 223 scenarios. Table 3 shows scale means and standard deviations for sacred value endorsements (SVM), decision, perceived decision difficulty, and negative emotions, listed for each scenario. Decision responses were not further examined as they are not of primary interest with regard to our hypotheses.

Table 3

Scale means (standard deviations) for sacred value endorsements, decision, decision difficulty, and negative emotions, for each scenario (n = 223)

Scenario	Sacred value ^a		Decision ^b	Difficulty ^c	Neg. emot. ^d
	Option 1	Option 2			
Taboo trade-offs					
Flood protection	4.07 (1.13)	2.82 (1.01)	1.67 (0.71)	3.51 (1.77)	2.07 (0.73)
Safety at work	5.18 (1.13)	2.33 (1.13)	2.08 (1.77)	2.71 (1.23)	2.06 (0.74)
Tragic trade-offs					
Flood protection	3.78 (1.23)	4.32 (1.16)	3.96 (1.95)	4.26 (1.70)	2.36 (0.85)
Safety at work	5.49 (1.31)	5.41 (1.17)	3.93 (2.07)	5.01 (1.51)	3.11 (0.75)
Routine trade-off					
Job offer	2.77 (0.81)	2.46 (0.80)	2.74 (1.64)	3.77 (1.46)	1.86 (0.70)

Note. Ratings for sacred values, decision, and decision difficulty were made on 7-point scales, whereas ratings for negative emotions were made on 5-point scales. ^aThe higher the scores, the higher the sacred value endorsements; for each scenario, scores refer to the order of options as it is shown in the method section and the appendix. ^bThe lower the score, the stronger the preference for option 1. ^cThe higher the score, the higher the level of perceived decision difficulty. ^dThe higher the score, the higher the level of negative emotions.

As a manipulation check, we first examined whether trade-off types corresponded with endorsements of sacred values. These endorsements were analyzed

with a mixed model ANOVA (trade-off type X option X scenario combination), with trade-off type and scenario combination as between subject factors and option as within-subject factor. As a result, a significant trade-off type X option interaction emerged, $F(2, 217) = 60.09, p < .001$. This interaction was further analyzed by computing simple main effects for both trade-off type and option. Table 4 shows the main results revealed by Bonferroni-adjusted pairwise comparisons. Simple main effect analyses yielded significant effects of trade-off type for options 1 and 2, $F_s(2, 217) > 75.76, p < .001$. Moreover, options differed from each other in the taboo trade-off condition, $F(1, 217) = 163.09, p < .001$, and, to a lesser extent, in the tragic trade-off condition, $F(1, 217) = 2.57, p = .11$, as well as in the routine trade-off condition, $F(1, 217) = 5.31, p < .05$. Thus, the results confirm that the sacred value endorsements varied as expected and the manipulation of trade-off type was therefore successful for the taboo and tragic trade-off condition. For the routine trade-off condition, however, the difference between options 1 and 2 was not expected, but the considerably low endorsements indicate that participants perceived the options as not being associated with sacred values.

Table 4

Scale means (standard deviations) for sacred value endorsements as a function of trade-off type and option (n = 223)

	Sacred value		
	Taboo	Tragic	Routine
Option 1	_a 4.63 _x (1.13)	_a 4.63 _x (1.27)	_b 2.77 _x (0.81)
Option 2	_a 2.57 _y (1.07)	_b 4.86 _x (1.16)	_a 2.46 _y (0.80)

Note. Scores refer to the order of options as it is shown in the method section and the appendix. Within a row, cell means with different subscripts (a, b) differ significantly at $p < .001$ in Bonferroni-adjusted pairwise comparisons. Within a column, cell means with different subscripts (x, y) differ significantly at $p < .05$ in Bonferroni-adjusted pairwise comparisons.

Next, we tested our hypothesis that decision difficulty and negative emotions vary as a function of trade-off type. A MANOVA provided further support that decision difficulty and negative emotions vary as a function of trade-off type, Wilks' $\Lambda = .74$, $F(4, 432) = 17.99$, $p < .001$. For decision difficulty, a significant main effect of trade-off type emerged, $F(2, 217) = 15.91$, $p < .001$. Bonferroni-adjusted pairwise comparisons revealed that the means showed the expected pattern: Compared to the routine trade-off condition ($M = 3.77$), the decision was perceived as more difficult in the tragic trade-off condition ($M = 4.64$), and as easier in the taboo trade-off condition ($M = 3.11$). Pairwise comparisons showed that all mean differences were significant ($ps < .05$). Furthermore, we found again a significant main effect for negative emotions, $F(2, 217) = 28.37$, $p < .001$. Closer examination of the emotions revealed the expected tendencies, even though the pattern was somewhat less prevalent than in Experiment 1. Compared to the routine trade-off condition ($M = 1.86$), participants tended to feel more negative in the taboo trade-off condition ($M = 2.07$); although this difference failed to reach significance ($p = .326$). In the tragic trade-off condition, the reported level of negative emotions ($M = 2.74$), however, was significantly higher than in the other trade-off conditions ($ps < .001$).

Overall, the patterns tend to replicate those of Experiment 1, in that decision difficulty and negative emotions are associated in a non-linear fashion as a function of distinct trade-off types and sacred value endorsements.

General discussion

The present research helps to clarify how decision difficulty and emotions are associated with trade-off types and sacred values. Our main findings were as follows: First, trade-offs involving sacred values tended to be more negatively emotion-laden than trade-offs not involving sacred values. This applied particularly to situations that pit one sacred value against another sacred value (i.e., tragic trade-off), and to a lesser extent to situations that pit one sacred value against a secular value (i.e., taboo trade-off). Second, the decision difficulty varied as a function of trade-off types. Compared to routine trade-off situations (i.e., two opposing secular values), decisions were perceived as easier when they involve taboo trade-offs, but, conversely, as more difficult when they involve tragic trade-offs. Third, negative emotions and perceived decision difficulty showed a non-linear relationship. In the taboo trade-off condition, people perceived the tasks as more negatively emotion-laden, but as easier to solve, compared to the routine trade-off condition. However, in the tragic trade-off condition, people perceived the decision tasks as most stressful and difficult.

The finding that trade-offs involving sacred values are relatively more negatively emotion-laden than routine trade-offs is in line with Tetlock's (2003) assumption that the *mere contemplation* of trade-offs that touch on sacred values elicits negative feelings of distress and disturbance. We believe that the emotions function as a signal to the decision-maker that something delicate and important is at stake that has to be protected. In this sense, the emotions may play an "advisory" or "informational" role in decision making (e.g., Damasio, 1994; Finucane, Alhakami, Slovic, & Johnson,

2000; Schwarz & Clore, 1996; Zajonc, 1998; see also Pfister & Böhm, and Zeelenberg, Nelissen, Breugelmans, & Pieters in this issue).

Trade-off types and decision difficulty were related in that taboo trade-off situations were perceived as easy, whereas tragic trade-off situations were perceived as difficult. At least with regard to the supposed association between taboo trade-off situations and decision difficulty, our findings are consistent with recent findings from Lichtenstein, Gregory, and Irwin (2007). In order to examine people's reactions to decision tasks addressing "taboo values" (i.e., sacred values), Lichtenstein et al. utilized a variety of preference measures (e.g., willingness to accept). Consistent with our research, they showed that decisions involving taboo values provoke negative emotions, while being perceived as easy to judge and as not demanding extensive thought. However, the authors did not examine trade-offs involving several conflicting values. As to tragic trade-offs, our findings suggest that the necessity of sacrificing one of these values intensifies both negative emotions and decision difficulty.

Our findings on how taboo and tragic trade-offs are linked to perceived decision difficulty can, in a sense, be seen as complementary to findings by Tetlock et al. (2000). As mentioned above, these authors examined the relationship between trade-off type and decision difficulty by letting participants judge *other people's decision making*. Their results provide an idea of which associations between trade-off type and decision difficulty are socially approved or disapproved. In contrast, we examined the relationship between trade-off type and decision difficulty by examining *participants' own decision making*. We found that taboo trade-off situations were perceived as easy and tragic trade-off situations were perceived as difficult. In line with this, Tetlock et al.

showed that people will gain social approval when they perceive the relationship between trade-off type and decision difficulty in this mentioned way. However, people will gain social disapproval when they evaluate taboo trade-off decisions as difficult and tragic trade-off decisions as easy.

As mentioned, decisions involving taboo trade-offs appear to be perceived as easy. This suggests that one function of sacred values could be to facilitate decisions (as long as they do not conflict with other sacred values). As stated, sacred values are protected from trade-offs with other values (i.e., secular values), therefore triggering noncompensatory decision strategies. Perhaps a form of “one-reason decision making” (Gigerenzer, Todd, & the ABC Research Group, 1999) might apply here, with sacred values providing a sufficient reason for preferring a particular option. Sacred values may work as a kind of moral heuristic or choice rule (e.g., Haidt, 2001; Luce, 1998; Sunstein, 2005). Of course, future research is needed to examine more thoroughly how sacred values affect decision processes.

The idea of a heuristic function of sacred values has some affinity with theories of moral judgment that refer to dual process models (e.g., Bargh & Chartrand, 1999; Chaiken & Trope, 1999). It has been proposed that moral judgment is primarily based on intuitive (i.e., fast and effortless) rather than deliberative (i.e., slow and effortful) processes (Haidt, 2001). It is possible that taboo trade-offs engage intuitive or affective processes, whereas tragic trade-offs engage deliberate processes. In the former case, the presence of just one sacred value option allows a quick choice in the sense of the mentioned moral heuristic. This notion is in accordance with Lichtenstein et al.’s findings (2007) that responses to taboo scenarios are driven primarily by affect.

However, in the case of a tragic trade-off (i.e., two conflicting sacred values), our findings of high negative emotions as well as high decision difficulty suggest stronger deliberate reasoning, in addition to emotional processes. This interpretation is in accordance with findings based on manipulated differences of the attractiveness of choice options (e.g., Dhar, 1997; Luce, 1998; Luce et al., 1997): Conflict between similarly attractive options was found to increase negative emotions, vigilant and information-acquisitive processing, and preference for avoidance options, if available. Moreover, the suggestion of simultaneous affective as well as reasoning processes of moral judgments was supported by recent findings from cognitive neuroscience (Greene & Haidt, 2002). In difficult moral dilemmas comparable to tragic trade-off situations, increased activities in brain regions associated with conflict perception, emotions (e.g., contempt and disgust) as well as with abstract reasoning and utilitarian judgments have been found (Greene, Nystrom, Engell, Darley, & Cohen, 2004).

Clearly, future research is needed to uncover in more detail the nature of processes underlying the facilitating effects of sacred values. With respect to the measurement of decision difficulty, additional or alternative measurement methods (e.g., reaction times or neural indicators) may be considered in future designs. Another methodological issue will also be further improving the assessment of emotions and clarifying the role of emotions when decisions tap into sacred values. It is important to note that our experiments evoked, on the whole, relatively mild emotions. Even though the emotional ratings in the situations containing taboo trade-offs tended to be perceived as more negative than in the routine trade-off situations, the emotional intensities and differences were smaller than expected. Recently, research also examining the

emotional reactions to taboo trade-offs has found considerably stronger emotions triggered by taboo issues (Ginges, Atran, Medin, & Shikaki, 2007; Lichtenstein et al., 2007). It may be that our scenarios were not vivid enough to provoke stronger emotions. Furthermore, recall that we used two different measures for negative emotions. These measures might not be entirely comparable (i.e., focus on emotional stress vs. negative affect in general); this could possibly explain why we found a significant difference in negative emotions between taboo and routine trade-off scenarios in the first but not in the second experiment.

In conclusion, sacred values as a possible source of decision difficulty, conflict, and emotions have mostly been neglected in prior research. Our findings suggest that sacred values may play a distinctive role in decision making because people preclude sacred values from trade-offs with other values. By introducing the role of sacred values and trade-off reluctance, we believe that our approach contributes significantly to the growing body of research on moral intuition and moral heuristics.

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Appendix A

Decision scenarios used in Experiment 1

Note. The following scenarios are described in an abbreviated version; the original was in German. The taboo trade-off “flood protection” scenario is omitted here since it is provided in the text.

Taboo trade-off, “safety at work”

Imagine that you are the CEO of a global company that has been criticized for poor working conditions in a Chinese factory. The management is discussing whether substantial investments to improve safety at work should be made. In this case, however, you would have to give up the goal of a profit increase. As CEO, you have to decide between investing in safety at work (option 1) and increasing profit (option 2).

Tragic trade-off, “flood protection”

Imagine that you are the president of the local authority of a village that has been severely affected by a flood. The local authority is discussing whether to invest a considerable amount of the annual budget in improved flood protection measures. In this case, however, the village would have to forego a planned project for vocational training and integration for unemployed adolescents. As president, you have to decide between the improvements in flood protection (option 1) and the project for vocational training and integration (option 2).

Tragic trade-off, “safety at work”

Imagine that you are the CEO of a global company that has been criticized for poor working conditions in a Chinese factory. The management is discussing whether substantial investments to improve safety at work should be made. In this case, however, you would have to accept the layoff of a third of the workforce due to financial reasons, thereby jeopardizing the future of many families. As CEO, you have to decide between investing in safety at work (option 1) and preserving jobs (option 2).

Routine trade-off, “job offer”

Imagine that you, as a parent, are solely responsible for your family’s livelihood. You have made several applications to find a new job. You have just received two offers, and it is now up to you to select one of them. Company A offers you an annual salary of CHF 80,000 [USD 66,000] and 20 vacation days per year, whereas company B offers you an annual salary of CHF 60,000 [USD 50,000] and 30 vacation days per year. You now have to decide between the job with a greater annual salary (option 1) and the job with a greater number of vacation days per year (option 2).

Decision scenarios used in Experiment 2

Note. The following scenarios are described in an abbreviated version; the original was in German. The tragic trade-off “safety at work” scenario is omitted here since it is provided in the text. Numbers in parentheses at the beginning of each paragraph were not given to the participants; they represent the position in the sequential experimental

procedure, that is, (1) presentation of option 1, (2) presentation of option 2, and (3) presentation of the final decision situation.

Taboo trade-off, “flood protection”

(1) Imagine that you are the president of the local authority of a village that has been severely affected by a flood. Currently, you are attending a meeting of the authority. There is a discussion about whether measures to improve flood protection should be taken. You now have to consider your position on improving flood protection, because there will be a vote at the end of the meeting.

(2) Before the final vote, further topics are discussed. Your village square has been in a pitiful condition due to unauthorized parking and damaged paving. There is a discussion about whether measures for a facelift for the village square should be taken. You should now consider your position on the facelift for the village square, because there will be a vote at the end of the meeting.

(3) This is the end of the meeting, and both suggestions, improvements in flood protection as well as the facelift for the village, have been approved. Because the implementation of both projects exceeds the available budget, you as president have to make the final choice between improvements in flood protection (option 1) and facelift for the village square (option 2).

Taboo trade-off, “safety at work”

(1) Imagine that you are the CEO of a global company that has been criticized for poor working conditions in a Chinese factory. You are attending a meeting of the

management. There is a discussion of whether measures to improve safety at work should be taken. You now have to consider your position on improving safety at work, because there will be a vote at the end of the meeting.

(2) Before the final vote, other topics are discussed. Your company has come under pricing pressure, because many competitors have a higher production volume. Hence, in order to cut prices, it has been suggested that production should be increased through additional facilities. You should now consider your position on increasing the production through additional facilities, because there will be a vote at the end of the meeting.

(3) This is the end of the meeting, and both suggestions, improving safety at work as well as increasing the production, have been approved. Because the implementation of both projects would exceed the available budget, you as CEO have to make the final choice between investing in safety at work (option 1) and increasing the production (option 2).

Tragic trade-off, “flood protection”

(1) Imagine that you are a member of the local authority of a village that has been severely affected by a flood. Currently, you are attending a meeting of the authority. There is a discussion about whether measures for improved flood protection should be taken. You now have to consider your position on improving flood protection, because there will be a vote at the end of the meeting.

(2) Before the final vote, further topics are discussed. Your village has been faced with growing juvenile violence and delinquency. Hence, there is a discussion

about whether a project for vocational training and integration for unemployed adolescents should be launched. You should now consider your position on the project for vocational training and integration, because there will be a vote at the end of the meeting.

(3) This is the end of the meeting, and both suggestions, improvements in flood protection as well as the project for vocational training and integration for unemployed adolescents, have been approved. Because the implementation of both projects exceeds the available budget, you as president have to make the final choice between improvements in flood protection (option 1) and the project for vocational training and integration (option 2).

Routine trade-off, “job offer”

(1) Imagine that you, as a parent, are solely responsible for your family’s livelihood. One day, you hear about a vacant position in another division, which provides a better salary than your current one. You now have to consider your opinion about the level of your income.

(2) A couple of days later, you hear about a vacant position at another branch office, which requires a shorter traveling distance to work than is currently the case. You should now consider your opinion about the traveling distance to work.

(3) Your boss informs you that the division you are working for is going to be closed, but that he intends to employ you further. He offers you the same two jobs that you have already heard about. The first offer provides a better salary, but requires a longer traveling distance to work since it has been relocated to another branch. The

second offer requires a shorter traveling distance to work, but provides a lower salary.

You now have to decide between a better salary (option 1) and a shorter traveling distance to work (option 2).

Appendix B

Sacred value measure

Note. Each item is followed by a 7-point scales ranging from 1 (strongly disagree) to 7 (*strongly agree*).

Experiment 1 (previous version of SVM)

Please rate your level of agreement with the following statements about [insert option 1 or 2; e.g., improving safety at work].

1. My stance on this issue might change over time.
2. I would not change my opinion, no matter what the costs.
3. I would have problems making any concessions on this topic.
4. There are principles involved in this topic that we should defend under any circumstances.

Experiment 2 (final version of SVM)

Please rate your level of agreement with the following statements about [insert option 1 or 2; e.g., improving safety at work]: [Insert option 1 or 2] is about something...

1. ...that we should not sacrifice, no matter what the benefits (money or something else).
2. ...which one cannot quantify with money.
3. ...for which I think it is right to make the cost-benefit analyses.
4. ...that involves issues or values which are inviolable.
5. ...for which I can be flexible if the situation demands it.

Negative emotions measures

Experiment 1 (scale of 5 items)

Note. Each item is followed by a 7-point scales ranging from 1 (strongly disagree) to 7 (*strongly agree*).

Please rate your level of agreement with the following statements, with respect to the current decision situation.

1. I am afraid to make the wrong choice.
2. This choice is threatening to me.
3. I am afraid to make a choice.
4. I am swamped with this decision.
5. This decision leaves me cold.

Experiment 2 (PANAS; Watson et al., 1988)

Note. Instruction: "In the following you are presented with a number of words that describe different feelings and emotions. Read each item and then mark the appropriate level of intensity on the scale next to that word. You can select from five levels." Each

item is followed by a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). ^aNegative emotion items, ^bpositive emotion items.

In the current decision situation, I am feeling: alert^b, afraid^a, proud^b, upset^a, hostile^a, strong^b, irritable^a, ashamed^a, nervous^a, active^b, distressed^a, scared^a, attentive^b, guilty^a, determined^b, interested^b, enthusiastic^b, excited^b, jittery^a, inspired^b.

Decision difficulty measures

Experiment 1 (single item)

How easy or difficult was it for you to decide? For me, this decision was... (7-point scale ranging from 1 [*very easy*] to 7 [*very difficult*])

Experiment 2 (scale of 5 items)

Note. Each item is followed by a 7-point scale ranging from 1 (strongly disagree) to 7 (*strongly agree*), except for item 1.

Please rate your level of agreement with the following statements, with respect to the current decision situation.

1. For me, this decision is... (7-point scale ranging from 1 [*very easy*] to 7 [*very difficult*])
2. I would need more time to decide.
3. I would not ponder for a long time on this decision.
4. I feel very ambivalent about this decision.
5. For this decision, I feel certain which option to choose.

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Running head: DECISIONS ON HUMAN RIGHTS ISSUES

Should I Approve of Torture or Not? Conflict and Self-Regulation Processes When
Deciding on Human Rights Issues

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Abstract

This article examines intrapersonal conflict and self-regulation processes which individuals undergo when confronted with choice situations in which human rights compete with other legitimate or moral requirements (e.g., national security or saving innocent lives). We propose that such processes are affected by the extent to which individuals consider human rights as absolute. To assess perceived absoluteness, we utilized the concept of sacred values (SV), which reflect issues or values individuals deem as absolute and precluded from trade-offs. Three experiments, including various choice scenarios, examined measures of ambivalence, emotional stress, fear, and guilt, as a function of SV endorsement and manipulation of trade-off type (taboo vs. tragic). As expected, people with higher levels of SV endorsement for human rights demonstrated more variation in intrapersonal measures depending on trade-off type than people with lower levels of SV, and showed predominantly lower scores in taboo scenarios. Overall, findings suggest that SV facilitate decisions on human rights issues, and highlight the role of self-regulation in moral decision making.

Keywords: Sacred values, protected values, human rights, torture, conflict, emotion, self-regulation, decision making

Should I Approve of Torture or Not? Conflict and Self-Regulation Processes When
Deciding on Human Rights Issues

The prohibition of torture is a main concern of the human rights movement of the United Nations (UN). As an expression of this concern, in the Universal Declaration of Human Rights (UDHR) in 1948, the UN proclaimed respect for the integrity and dignity of human beings, and in Article 5, declared torture to be an unacceptable violation of human rights (United Nations, 2002, p. 2). In 1984, in the Convention against Torture, the UN stated that “no exceptional circumstances whatsoever” justify torture (United Nations, 2002, p. 316). In other words, the protection of human rights and calls to stop torture have gained an absolute character.

However, heated debates regarding the pros and cons of torture reveal that the absoluteness is not as universally supported and commonly approved of as one might expect. For example, the discovery of severe maltreatments of terror suspects held in various U.S. army bases has prompted the question of whether the United States should allow torture to force information from terror suspects. Prominent opinion leaders have justified human rights violations in the name of protecting national security. A further contentious issue concerned the case of two police officers in Germany. In 2002, they threatened the arrested kidnapper of an 11-year-old boy with torture in order to force information to be revealed about the boy’s whereabouts, in the hope of saving his life. Later, this threat of torture was judged in several judicial proceedings as violating human rights law, and the two police officers were condemned for coercion. Such cases have not only given rise to a revival of interest in human rights and torture, but also

clearly reflect conflicts and different positions underlying judgment and decision making about torture. Indeed, polls usually show that people are divided on whether or not torture can ever be justified (e.g., Kull et al., 2008). Some clearly oppose torturing and emphasize the absoluteness of the human rights principle that prohibits torture *under any circumstances* (as proclaimed in the UN Convention); others point out that its application to force information can save innocent lives.

To explain individual differences in commitment to human rights, research has traditionally dealt with different aspects and determinants, such as attitudinal structure underlying human rights principles (e.g., Cohrs, Maes, Moschner, & Kielmann, 2007; Diaz-Veizades, Widaman, Little, & Gibbs, 1995; McFarland & Mathews, 2005), representation of human rights and their relations to value priorities (e.g., Doise, Spini, Jesuino, Ng, & Emler, 1994; Spini & Doise, 1998), knowledge about human rights (Stellmacher, Sommer, & Brähler, 2005), and willingness to engage in behaviors related to human rights issues (Stellmacher et al., 2005; Stellmacher, Sommer, & Imbeck, 2003).

Other studies have shown that the approval of human rights apparently varies depending on whether human rights violations are discussed on a general or a concrete level (Doise, Dell'Ambrogio, & Spini, 1991). While the vast majority of people express adherence to the principles of human rights when they are discussed on an abstract level, their judgments drift apart when faced with concrete cases of human rights violations. Concrete cases bring some individuals to switch their focus. The focus is then no longer on principles of human rights, but on the evaluation of an actor's behavior. If the person's acts are judged as bad and unacceptable, sanctions are

preferred, irrespective of whether these sanctions violate human rights (Staerklé & Clémence, 2004).

Even though previous research has largely contributed to a better comprehension of the psychological basis of human rights, still very little is known about the cognitive-affective and self-regulation processes which individuals undergo when confronted with conflict situations that put the purpose of human rights at risk. For example, how do individuals deal or struggle with situations in which human rights compete with other legitimate or moral requirements (such as national security or saving innocent lives)? In this paper, we argue that such processes are affected by the extent to which individuals consider human rights as absolute and universal. One approach in social psychology that is concerned with the role of values that people hold as absolute and inviolable is the theory of sacred (or protected) values (e.g., Atran, Axelrod, & Davis, 2007; Baron & Spranca, 1997; Tanner, 2009; Tanner, Ryf, & Hanselmann, 2009; Tetlock, 2003; Tetlock, Kristel, Elson, Lerner, & Green, 2000). Sacred values refer to issues or values which individuals believe ought to be absolute and protected from trade-offs. Given their proclaimed absolute character, we deem human rights to be a prototypical example of a sacred value. Previous research has shown that sacred values powerfully shape decision making processes. In this article, we propose that different intrapersonal processes operate when human rights – or more specifically, prohibition of torture – are treated as sacred.

Sacred Values and Trade-Off Types

Sacred values (or protected values, taboo values, moral mandates, for similar notions) refer to core values to which individuals are strongly committed, and which

they deem as absolute and excluded from trade-offs (Baron & Spranca, 1997; Lichtenstein, Gregory, & Irwin, 2007; Skitka, 2002; Tanner, 2009; Tanner & Medin, 2004; Tanner et al., 2009; Tetlock, 2003; Tetlock et al., 2000). Importantly, sacred values meet specific criteria that go beyond simply valuing entities or issues. For this paper, we wish to focus on the following three characteristics:

(1) Sacred values are associated with *trade-off reluctance*. Trade-offs are typical processes involved in human decision making, and the capacity to make trade-offs and apply exchanges between competing values is a defining attribute of decision making. It is evident from past research, however, that individuals who endorse sacred values tend to be highly reluctant to trade off certain values or entities. For example, many individuals deem it as unacceptable and morally wrong to sacrifice freedom, love, honor, natural resources, or human lives in return for any other values, in particular economic benefit (e.g., Baron & Spranca, 1997; Fiske & Tetlock, 1997; Tetlock, 2003; Tetlock et al., 2000). It may be important to emphasize that sacred values are similar, but not identical, to other value concepts, commonly seen as stable beliefs about desirable states or conducts of behaviors (e.g., Rohan, 2000; Schwartz, 1992). While the concept of values does not necessarily exclude trade-offs, sacred values are those that people believe “ought” to be protected from trade-offs and which are associated with non-instrumental defense reactions (Atran et al., 2007). Sacred values (or moral mandates) are also similar to strong attitudes, but are usually held with strong moral convictions (Skitka, Bauman, & Sargis, 2005) and associated with principled, non-consequentialist reasoning (Tanner, Medin, & Iliev, 2008).

(2) Trade-offs involving sacred values are *negatively emotion-laden*. Studies have shown that individuals react with strong feelings of anger or moral outrage to *others* violating such values or moral mandates (e.g., Ginges, Atran, Medin, & Shikaki, 2007; Tetlock et al., 2000); they protest, show an increase in social and physical distance, or even demonstrate intentions to sanction the transgressor (Atran et al., 2007; Ginges et al., 2007; Skitka et al., 2005; Wright, Cullum, & Schwab, 2008). In a study testing the role of sacred values in the context of the Middle East conflict between Israeli settlers and Palestinians, Ginges et al. found that individuals who endorse sacred values respond not only with strong outrage to offers to sacrifice sacred values in exchange for money, but also with increased support for violence (such as suicide attacks) toward others who attack their sacred values. Beyond this, initial research also suggests that individuals suffer emotionally from trading off sacred values when they are *themselves* in the position of the decision maker (Hanselmann & Tanner, 2008). These findings are in line with Tetlock's (2003) assumption that even the mere contemplation of taboo trade-offs may elicit negative feelings of stress and disturbance.

(3) Sacred values can work as a *decision tool* or *moral heuristic*. Hanselmann and Tanner (2008) proposed that sacred values can help to *facilitate* decision making because people can then rely on values that are precluded from trade-offs. Consistent with this, individuals were found to perceive a choice task as easier to solve when it reflected a *taboo trade-off* (i.e., situations which pit a sacred value against a secular value), compared to a task that was not linked with sacred values. In contrast, when the task reflected a *tragic trade-off* (i.e., situations which pit two sacred values against each other), people were forced to choose the lesser of two evils and to violate one of the two

sacred values (Mandel & Vartanian, 2008; Tetlock et al., 2000). Consequently, they perceived the situation as very difficult to solve.

As an explanation for how sacred values facilitate decision making, Hanselmann and Tanner (2008) suggested that sacred values work as a heuristic (e.g., Haidt, 2001; Gigerenzer, Todd, & the ABC Research Group, 1999; Sunstein, 2005), as long as they do not conflict with other sacred values or moral requirements. For example, sacred values may be similar to “one-reason decision making” (Gigerenzer et al., 1999) in that they provide a sufficient reason for choosing a particular option, and to Haidt’s (2001) notion of moral intuition in that they are highly, if not essentially, affect-laden, providing rapid “gut” responses. In addition, the emotions which are elicited by the mere contemplation of taboo trade-offs may play an “informational” role in signaling that something delicate and important is at risk (cf. Damasio, 1994; Finucane, Alhakami, Slovic, & Johnson, 2000; Luce, 1998; Schwarz & Clore, 1996).

Overall, the findings suggest that sacred values can work as a facilitator or barrier in decision making. Decision making can be more or less difficult depending on agents’ characteristics (whether or not individuals associate sacred concerns with the task) and on the characteristics of the problems themselves, such as *trade-off types* (i.e., whether the problem has the structure of a taboo or tragic trade-off situation). In the present article, we aim to generalize these findings by applying the notion of sacred values to the human rights context and to extend previous research by taking a closer look at intrapersonal processes. Past research and theory on the role of sacred values has paid much attention to the *other-focused* emotions and interpersonal regulation mechanism. Yet, we lack knowledge about *self-focused* (moral) emotions and conflict

processes with which individuals who endorse sacred values struggle when confronted with trading them off. To address this, the focus is less on people's choices per se and rather on various cognitive and affective dimensions which reflect how much conflict the decision maker may experience in reaching a decision.

Specifically, we will address the following important dimensions of perceived conflict and moral emotions: (1) *Experienced ambivalence*, as a relevant cognitive indicator of conflict. Ambivalence is typically defined as reflecting the simultaneous existence of positive and negative beliefs with regard to the same object (Jonas, Broemer, & Diehl, 2000a). (2) *Emotional stress*, as a general indicator of perceived burden, as well as (3) *fear* as a specific emotional conflict indicator and as a signal to the individual that something relevant is at risk (e.g., Damasio, 1994; Finucane et al., 2000; Luce, 1998; Schwarz & Clore, 1996). (4) *Guilt* refers to an important emotion related to moral self-regulation, prompting people to act in good way and preventing them from committing a transgression of moral or social norms (Frank, 1988; Haidt, 2003; Ketelaar & Au, 2003; Sheikh & Janoff-Bulman, 2010). Research and theory has suggested that guilt may operate as a "commitment device" that motivates individuals to reaffirm the status of moral values at hand and thereby helps to protect central elements of one's moral identity (cf. Aquino & Reed, 2002). To summarize, we thus believe that individuals who consider human rights as a sacred value will respond differently to various conflict situations, which will be reflected in distinct cognitive and affective processes.

Goals and Predictions

The main goals of the present article are to examine 1) how concerns for human right principles as sacred values are associated with choices on allowing or rejecting the application of torture, 2) how they affect cognitive and affective conflict dimensions and moral emotions, such as ambivalence, emotional stress, fear, and guilt, and 3) how these processes depend on trade-off types. We report three experiments that include various choice scenarios, assessment of sacred values, and a manipulation of taboo versus tragic trade-offs. Our hypotheses are as follows.

Hypothesis 1: People with higher levels of sacred value endorsement for human rights will show more extreme choices of rejecting torture than people with lower levels of sacred value endorsement. This follows from the idea that sacred values are associated with strong commitments to protect the principle at hand and to reject any trade-offs. Even though opposing torture should be easier under taboo than tragic trade-off conditions, we expect that considering human rights as a sacred value will generally augment trade-off aversion and rejection of torture. This hypothesis refers to behavioral expressions of sacred values, but choices per se do not reveal anything about the subjective perception of the problem at hand. This aspect will be addressed in the next hypotheses.

Hypothesis 2: People with higher levels of sacred value endorsement for human rights will show more variation in intrapersonal conflict processes depending on trade-off type than people with lower levels of sacred value endorsement. Specifically, we hypothesize that people with higher levels of sacred value endorsement will demonstrate larger differences between taboo and tragic trade-off scenarios in

ambivalence (H2a), emotional stress (H2b), fear (H2c) and guilt (H2d). These propositions follow from the idea that various conflict situations with different prospects to succeed or fail in protecting human rights have different implications for people who consider human rights as absolute principles.

Hypothesis 3: In this context, we also further explore which of two plausible mechanisms is more likely to account for these distinct cognitive-affective reactions: sacred values as a “facilitator” or sacred values as a “barrier”. On the one hand, sacred values as a facilitator or moral heuristic suggests that people who endorse such values will benefit from relying on an absolute principle; the feasibility of affirming its absolute status helps to reduce negative intrapersonal reactions. If this is the case, we expect differences to emerge between people with high or low levels of sacred values predominantly in conflict situations that pit a sacred value against another (not sacred) value (i.e., taboo trade-offs). In this case, taboo trade-off scenarios are expected to lead to less ambivalence, more emotional relief, and less fear and guilt for people with higher levels of sacred values compared to those with lower levels (H3a).

On the other hand, sacred values as a barrier emphasizes that people who endorse such values will be more likely to suffer from upholding an absolute principle. If so, we would expect to find differences in negative cognitive-affective reactions between people with high and low levels of sacred values in problems that pit human rights against another important (moral) requirement (i.e., tragic trade-offs). In this case, tragic trade-off scenarios are expected to prompt more ambivalence, distress, fear and guilt for people with higher levels of sacred values compared to those with lower levels (H3b).

Experiment 1

This experiment examined Hypotheses 1 and 2a by utilizing two conflict situations that reflected hotly debated issues in the public domain: The taboo trade-off scenario (“counterterrorism”) raised the question of whether or not torture should be allowed to force information from terror suspects. It was designed to reflect a conflict between upholding human rights versus ensuring national security. The other task, the tragic trade-off scenario (“kidnapping”) raises the question of whether or not torture should be allowed to force information from a child kidnapper. This scenario was designed to reflect a conflict between upholding human rights versus saving a child’s life.

In addition, to back up our assumption that our manipulation of trade-off type reflects the proposed conflict structure, we referred to Schwartz’s value system structure (Schwartz, 1992; Schwartz & Bilsky, 1987). This approach displays individuals’ value priorities on a circular structure and permits value combinations to be deduced, which are likely to be conflicting or not conflicting. In this study, we made use of this characteristic to verify the structure of our tragic and taboo trade-off scenarios.

Value Structure and Trade-Off Types

Schwartz’s value theory (e.g., 1992) suggests that individuals differ in the relative importance they place on a universal set of 10 motivationally distinct value types. The dynamic relations among these value types can be displayed on a circular structure, along two dimensions. One dimension opposes self-transcendence (universalism, benevolence) against self-enhancement (power, achievement, hedonism),

while the other opposes openness to change (self-direction, stimulation) against conservation (security, conformity, tradition). For our purposes, it is essential that the circular structure also permits patterns of individually conflicting or non-conflicting value relations to be specified (Schwartz, 1992). Specifically, two values that are both important for an individual and close to one another on the circle imply a conflict for this individual when faced with a trade-off that pits one value against the other. On the other hand, values that lie in a more opposing direction from the center depict an important and unimportant value for the individual and imply less conflict when faced with a trade-off between these two values.

Following other authors (cf. Doise et al., 1994; Spini & Doise, 1998), we assumed that people who value human rights highly also assign a high priority to universalism values. Applied to our study, we concluded that for such people, a taboo trade-off situation is likely when pitting universalism values (such as human rights) against security values (such as national security), representing opposing values in Schwartz's circular structure. Conversely, a tragic trade-off structure is likely when pitting two universalism values (such as human rights versus protecting a child's life) against each other, representing close values in Schwartz's circular structure (cf. Schwartz, 2007). Accordingly, our "counterterrorism" (taboo trade-off) and "kidnapping" (tragic trade-off) scenario were designed to reflect these constellations. In order to examine whether our trade-off type manipulation reflected these structures, we assessed respondents' relative value priorities using the short version of the Portrait Values Questionnaire (*PVQ*; Schwartz, Melech, Lehmann, Burgess, & Harris, 2001; Schwartz, 2003).

Method

Participants and design. A sample of 192 students from the University of Zurich participated in the online experiment. They consisted of 115 women and 77 men, ranging in age from 19 to 83 years ($M = 25.59$). Participants were randomly assigned to one of two decision scenarios, either the taboo trade-off scenario (“counterterrorism”) or the tragic trade-off scenario (“kidnapping”). Sacred values (SV) endorsement and value priorities were assessed separately. Dependent variables were ambivalence and decision to allow or reject the application of torture.

Procedure and materials. Participants were initially introduced to the topic and informed about the purpose of the study. To assess the extent to which participants treat human rights in the context of torture as a sacred value, they were provided with a previous version of the Sacred Value Measure (SVM) by Tanner et al. (2009). Participants were presented with four statements (e.g., “Human rights are something that we should defend under any circumstances”; “Human rights are something for which I would have problems to make any concessions”) and were asked to indicate the extent of their agreement on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) ($\alpha = .64$).

Later, participants responded to the short 21-item version of the PVQ (Schwartz, 2003; Schwartz et al., 2001) in order to assess their value priorities. This instrument contains short verbal portraits of 21 different people, with gender being matched to the participants’ own gender. Each portrait describes a person’s aspiration, which relates to one particular value type. For example, an item representing the importance of *universalism* was: “He thinks it is important that every person in the world is treated

equally. He believes everyone should have equal opportunities in life.” Participants were asked to rate, on a 6-point scale, their perceived similarity to the portrayed person (1 = *very much like me*; 6 = *not like me at all*). To capture more explicitly the values manipulated in the scenarios, we added two portraits to the original set, one pointing to the value of upholding human rights, and the other to the value of ensuring children’s welfare. Note that the value of ensuring national security was already captured by one of the original portraits.

Participants were then given one of the two decision scenarios. The taboo trade-off scenario “counterterrorism” was as follows (shortened):

Imagine that you work as a chief investigator for the police. The police arrested a man suspected of planning terror attacks together with other accomplices. The suspect refuses to reveal his plans and accomplices. You have to decide about the further steps. You therefore initiate a discussion with your team regarding whether or not torture should be allowed to force information from the suspect. Some colleagues point out that applying torture violates basic human rights, for which reason they would oppose torturing the suspect in this case. Other colleagues emphasize that national security is at risk, for which reason they would allow the torturing of the suspect in this case. What is your choice in this case?

The tragic trade-off scenario “kidnapping” was as follows (shortened):

Imagine that you work as a chief investigator for the police. The police arrested the kidnapper of a five-year-old child, but it is still unknown where the child is being hidden. The kidnapper refuses to reveal the hide-out and the status of the child. You have to decide about the further steps. You therefore initiate a discussion with your team regarding whether or not torture should

be allowed to force information from the kidnapper. Some colleagues point out that applying torture violates basic human rights, for which reason they would oppose torture in this case. Other colleagues emphasize that the child's life is at risk, for which reason they would allow torture in this case. What is your choice in this case?

Participants were then asked to indicate their ambivalence on four items (adapted following Jonas, Broemer, & Diehl, 2000b; $\alpha = .93$). For example, two items were: "My thoughts concerning the application of torture are..." (1 = *not at all mixed*; 7 = *very mixed*) or "Concerning the application of torture, I feel myself..." (1 = *not at all wavering*; 7 = *very wavering*). Finally, they indicated their choice regarding torture on a scale ranging from 1 (*clearly in favor of torture*) to 7 (*clearly against torture*). At the end, participants were debriefed.

Results and Discussion

Preliminary analyses. We began by examining how respondents' value priorities (based on the PVQ ratings) corresponded with the trade-off type manipulations. Following Schwartz (2003), PVQ ratings were centered to eliminate individual differences in the use of the response scale. The mean score across the items measuring a particular value type indicates how important this value type is as a guiding principle in the participant's life. The scores for each value type were subjected to an ANOVA with repeated measures. We found a significant main effect for value type, $F(5.74, 1095.93) = 136.51, p < .001, \eta^2 = .42$, and among the ten value types, participants assigned the highest priorities to universalism ($M = -0.91$) and benevolence ($M = -0.97$) (whose means did not differ from each other, $p > .999$). As expected,

security ($M = 0.27$) was found to be considerably less important than universalism ($p < .001$). In addition, we found that our additional item pointing to the value of upholding human rights correlated positively with universalism ($r = .57, p < .001$).

Confirming the taboo trade-off structure, human rights and universalism were negatively associated with national security ($r = -.23, p = .001$, and $r = -.34, p < .001$, respectively); and in accordance with the tragic trade-off structure, human rights and universalism were positively associated with valuing children's well-being ($r = .43$ and $r = .38$, respectively, $ps < .001$). Overall, these findings suggest that the manipulation of taboo versus tragic trade-off types matched reasonably well with participants' relative value priorities.

Main analyses. To test Hypotheses 1 and 2a, two multiple regression analyses were conducted, with decision and ambivalence as dependent variables. Age and gender served as control variables. SV endorsement as continuous variable was centered (Cohen, Cohen, West, & Aiken, 2003). Trade-off type (0 = taboo; 1 = tragic) and SV endorsement, followed by the interaction term $SV \times \text{Trade-Off Type}$, were used as predictors.

For the decision, the total variance explained by the model was (adjusted) $R^2 = .29$. SV endorsement ($\beta = .49, p < .001$) and trade-off type ($\beta = -.23, p < .001$) were revealed as significant predictors. The results show that rejection of torture was more extreme in taboo than in tragic conflict situations. However, as expected, people who more strongly endorsed human rights as an SV were generally more extremely against torture, across both trade-off conditions. This supports Hypothesis 1.

For ambivalence, the total variance explained by the model was (adjusted) $R^2 = .12$. Again, SV endorsement ($\beta = -.39, p < .001$) and trade-off type ($\beta = .11, p = .095$) were revealed as significant and marginally significant predictors, respectively. More importantly, these effects were qualified by a significant $SV \times \text{Trade-Off Type}$ interaction ($\beta = .21, p = .026$). Decomposing the interaction one standard deviation above and below the mean of SV endorsement (Aiken & West, 1991; Baron & Kenny, 1986), we found a significant effect of trade-off type among participants with high levels of SV ($\beta = .27, p = .006$), but not among people with low levels of SV ($\beta = -.04, p = .681$). As illustrated in Figure 1a, these results reflect the greater magnitude of differences in ambivalence ratings between the trade-off types among participants with high levels of SV compared to those with low levels of SV. This confirms Hypothesis 2a. Moreover, Figure 1a suggests that these differences were based in particular on different reactions to the taboo trade-off scenario: Participants with high levels of SV reported less ambivalence in the taboo trade-off condition than participants with low levels of SV. This finding supports Hypothesis 3a.

Overall, the results of Experiment 1 lend first support to our hypotheses. Consistent with Hypothesis 1, treating human rights as a sacred value generally augments rejection of torture. Furthermore, in support of Hypothesis 2a, we found that people with higher levels of SV endorsement show more variation in experienced ambivalence depending on trade-off type than people with lower levels of SV, indicating that various conflict situations have different implications for people who consider human rights as an absolute principle. More specifically, these people

experienced less ambivalence in the taboo trade-off scenario, lending first support to the assumption of sacred values serving as a facilitator (Hypothesis 3a).

Experiments 2 and 3

Experiments 2 and 3 used nearly identical procedures, but examined different dependent variables. Due to space restrictions, we will therefore present them together and combine the method and results sections. In these studies, we sought to replicate and extend the results of Experiment 1. For this purpose, three modifications were applied. First, beyond using other variants of decision and ambivalence measures, we also included emotional stress, fear and guilt as additional dependent variables. Second, we manipulated trade-off types in a more straightforward manner and utilized two different scenarios: The taboo trade-off situation was this time more in line with a prototypical sacred-secular value trade-off situation (e.g., Tetlock et al., 2000), reflecting a conflict between human rights versus monetary benefits. Specifically, the taboo trade-off scenario (“robbery”) raised the question of whether or not torture should be allowed in return for money (i.e., getting information about the whereabouts of a money haul). The tragic trade-off scenario (“time bomb”) raised the question of whether or not torture should be allowed in order to force information to be revealed about a live time bomb in a crowded location. This scenario reflected a conflict between upholding human rights versus saving people’s lives. Third, to check whether participants indeed perceived the trade-off types as different, we asked them to judge the acceptability of the choice options (allowing or rejecting torture). We expected to find larger differences in acceptability ratings between the options in the taboo trade-off (with one option being

clearly more unacceptable than the other), and smaller differences in the tragic trade-off scenario (with both options being perceived as similarly unacceptable).

In the following, information and findings enclosed by brackets relate to Experiment 3, where not otherwise stated.

Method

Participants and design. Participants were 258 [276] students from the University of Zurich and the Swiss Federal Institute of Technology Zurich participated in this online experiment, which was advertised through e-mails (169 [182] women, 87 [93] men, 2 [1] unknown). Their ages ranged from 18 to 58 [17 to 71] years, $M = 25.03$ [$M = 26.70$]. They randomly received one of two decision scenarios, either the taboo trade-off scenario (“robbery”) or the tragic trade-off scenario (“time bomb”). Sacred values were again assessed separately. Both experiments shared the dependent variables, ambivalence, decision on torture, and acceptability of the two choice options. Beyond that, additional dependent variables were emotional stress (in Experiment 2 only), and fear and guilt (in Experiment 3 only).

Procedure and materials. In both studies, participants were provided with either the taboo or tragic trade-off scenario upon reading the introduction. The taboo trade-off scenario “robbery” was as follows (shortened):

Imagine that you work as a chief investigator for the police. You are in charge of a serious robbery case. After several fruitless attempts, the police arrested one of the robbers. The robber refuses to reveal the location of the hauled money. One more failure in this case would

jeopardize your public image. You now have to consider whether or not you should allow the torturing of the robber to force information to be revealed about the whereabouts of the money. What is your choice in this case?

The tragic trade-off scenario “time bomb” was as follows (shortened):

Imagine that you work as a chief investigator for the police. You were informed that a live time bomb had been placed by a terrorist organization in a highly frequented district, but the exact location of the bomb still remains unknown. The police arrested a man suspected of being the head of the planned attack. The suspect refuses to reveal the location. You now have to consider whether or not you should allow the torturing of the suspect to force information to be revealed about the whereabouts of the bomb. There is probably still enough time to deactivate the bomb. What is your choice in this case?

After reading the scenario, participants indicated their choice regarding whether they would allow (option 1) or reject (option 2) torture in this case. Next, as manipulation check, participants were asked to indicate how acceptable they judge each of the two choice options to be on a 7-point [5-point] scale ranging from 1 (*not at all acceptable*) to 7 [5] (*very acceptable*). To assess sacred value endorsements, participants were then provided with a subscale of the current SVM by Tanner et al. (2009) ($\alpha = .79$ [$\alpha = .77$]), encompassing five statements (e.g., “This decision is about something that we should not sacrifice, no matter what the benefits (money or otherwise)”; “This decision involves issues or values which are inviolable”). Participants indicated their extent of agreement on 7-point [5-point] scales (1 = *strongly disagree*; 7 [5] = *strongly agree*).

In Experiment 2, the final block assessed emotional stress, and ambivalence through a combination of items that tapped into decisional conflict and choice difficulty (cf. Hänze, 2002). Emotional stress was assessed by three items (e.g., “When faced with this decision, I feel bad”; “This decision is stressful for me”; $\alpha = .94$), ambivalence by four items (e.g., “When faced with this decision, I feel myself wavering”; “When faced with this decision, I get into conflict”; $\alpha = .95$). Respondents indicated the extent of their agreement (1 = *strongly disagree*; 7 = *strongly agree*), and evaluated the decision difficulty (1 = *very easy*; 7 = *very difficult*).

In Experiment 3, the final block of questions assessed fear, guilt, and ambivalence. Participants were asked to indicate their current feelings of fear and guilt, interspersed with other emotions as filler items, on 5-point scales (1 = *strongly disagree*; 5 = *strongly agree*). Thereafter, participants indicated the extent of their agreement with the statement “When faced with this decision, I feel myself wavering” (1 = *strongly disagree*; 5 = *strongly agree*), and were given one item to evaluate decision difficulty (1 = *very easy*; 5 = *very difficult*). The items on ambivalence and decision difficulty were combined again into a joint measure of ambivalence ($\alpha = .92$). Upon completion, participants were debriefed.

Results and Discussion

Manipulation check. The analyses assured that the trade-off type manipulation was effective in both studies. A mixed model ANOVA with trade-off type (taboo vs. tragic; between-subject factor) and option (1. allowing torture vs. 2. rejecting torture; within-subject factor) as independent variables and acceptability ratings as dependent

variable revealed a significant Trade-Off Type \times Option interaction, $F(1, 256) = 150.94$, $p < .001$, $\eta^2 = .37$, [$F(1, 274) = 119.06$, $p < .001$, $\eta^2 = .30$]. As support for the manipulation, further inspection revealed that acceptability ratings (lower scores indicated more unacceptable options) between allowing and rejecting torture differed to a much larger extent in the taboo than in the tragic trade-off scenario. In Experiment 2, participants evaluated option 1 as much more unacceptable than option 2 ($M_{Option1} = 1.52$; $M_{Option2} = 6.60$), $F(1, 256) = 532.86$, $p < .001$, $\eta^2 = .68$, in the taboo trade-off scenario, compared to the tragic trade-off scenario ($M_{Option1} = 3.67$; $M_{Option2} = 4.92$), $F(1, 256) = 32.60$, $p < .001$, $\eta^2 = .11$. Similarly, in Experiment 3, participants differed broadly between option 1 and option 2 ($M_{Option1} = 1.53$, $M_{Option2} = 4.54$) in the taboo trade-off scenario, $F(1, 274) = 412.20$, $p < .001$, $\eta^2 = .60$, but they did so to a lesser extent in the tragic trade-off scenario ($M_{Option1} = 2.75$, $M_{Option2} = 3.44$), $F(1, 274) = 21.16$, $p < .001$, $\eta^2 = .07$.

Main analyses. Several regression analyses were conducted to test for Hypotheses 1 and 2a-d. Again, age and gender served as control variables, and SV was centered. Trade-off type (0 = taboo; 1 = tragic) and SV, followed by the interaction term SV \times Trade-Off Type, served as predictors.

Since decision on torture was a binary variable in both Experiments 2 and 3, logistic regression analyses were run. The total variance explained by the model in Experiment 2 was (adjusted) $R^2 = .62$, and in Experiment 3 (adjusted) $R^2 = .65$. Both experiments replicated the findings of Experiment 1 and lend further support to Hypothesis 1. Again, rejection of torture was more likely in taboo trade-off than in tragic trade-off scenarios ($B = 4.26$, $SE = 1.58$, Wald = 7.23, $p = .007$, $OR = 70.78$ [$B =$

3.78, $SE = 0.96$, Wald = 15.62, $p < .001$, $OR = 43.84$)). However, as expected, participants who more strongly endorsed human rights as an SV were more likely to reject torture ($B = 1.27$, $SE = 0.24$, Wald = 28.27, $p < .001$, $OR = 3.56$ [$B = 2.17$, $SE = 0.38$, Wald = 32.70, $p < .001$, $OR = 8.77$]), across both trade-off conditions.

For the other dependent variables, separate multiple regression analyses were run. The analyses provided support for Hypothesis 2, that taboo and tragic trade-off scenarios prompt different responses among people with high or low levels of SV. For ambivalence, both experiments revealed patterns similar to those in the previous study and therefore provided further support for Hypothesis 2a. The total variance explained by the model in Experiment 2 was (adjusted) $R^2 = .53$, and in Experiment 3 (adjusted) $R^2 = .39$. In both studies, SV endorsement ($\beta = -.41$, $p < .001$, [$\beta = -.47$, $p < .001$]) and trade-off type ($\beta = .54$, $p < .001$, [$\beta = .46$, $p < .001$]) were revealed as significant predictors. The SV \times Trade-Off Type interaction was also significant ($\beta = .14$, $p = .041$, [$\beta = .24$, $p < .001$]). As in Experiment 1, inspection of the interactions showed greater differences in ambivalence between trade-off types among participants with high levels of SV ($\beta = .63$, $p < .001$, [$\beta = .64$, $p < .001$]) than among participants with low levels of SV ($\beta = .44$, $p < .001$, [$\beta = .28$, $p < .001$]), and further exploration revealed that these differences were based in particular on different reactions to the taboo trade-off scenario.

Experiment 2 used emotional stress as an additional dependent variable and supported Hypothesis 2b. The regression analysis revealed a total variance explained by the model of (adjusted) $R^2 = .35$. As before, SV endorsement ($\beta = -.25$, $p = .002$), trade-off type ($\beta = .55$, $p < .001$), as well as the SV \times Trade-Off Type interaction ($\beta = .25$, $p =$

.001) proved to be significant. Further inspection of the interaction revealed that trade-off types had a stronger effect on the level of distress for people with high ($\beta = .73, p < .001$) than low levels of SV ($\beta = .37, p < .001$). To explore these differences, Figure 1b shows that people with high levels of SV felt less distressed in the taboo trade-off scenario, but more distressed in the tragic trade-off scenario, compared to people with low levels of SV. This finding provides support for both Hypothesis 3a and 3b.

Experiment 3 used fear and guilt as additional dependent variables and supported Hypotheses 2c and 2d. The total variance explained by the model was (adjusted) $R^2 = .17$ when fear was analyzed, and (adjusted) $R^2 = .23$ when guilt was analyzed. In both regressions, SV endorsement and trade-off type emerged as significant (or at least marginally significant) predictors of fear ($\beta = -.14, p = .080$, and $\beta = .41, p < .001$, respectively), and of guilt ($\beta = -.24, p = .002$; and $\beta = .44, p < .001$, respectively). More importantly, the SV \times Trade-Off Type interaction proved to be significant for fear ($\beta = .15, p = .047$), as well as for guilt ($\beta = .17, p = .025$). Inspection of these interactions revealed that people with high levels of SV reflect a greater magnitude of differences in fear ($\beta = .52, p < .001$) and guilt ($\beta = .56, p < .001$) responses between the two trade-off types than people with low levels of SV ($\beta = .29, p < .001$, for fear, and $\beta = .31, p < .001$, for guilt, respectively). Further exploration of differences in fear ratings shows that, similar to emotional stress, people with high levels of SV felt less fearful in taboo trade-off scenarios, but more fearful in tragic trade-off scenarios, compared to people with low levels of SV. As Figure 1c suggests, this finding again provides support for both Hypothesis 3a and 3b. However, differences in guilt ratings between people high and low in SV were primarily based on the

responses to the taboo trade-off rather than to the tragic trade-off scenario, lending further support to Hypothesis 3a (see Figure 1d).

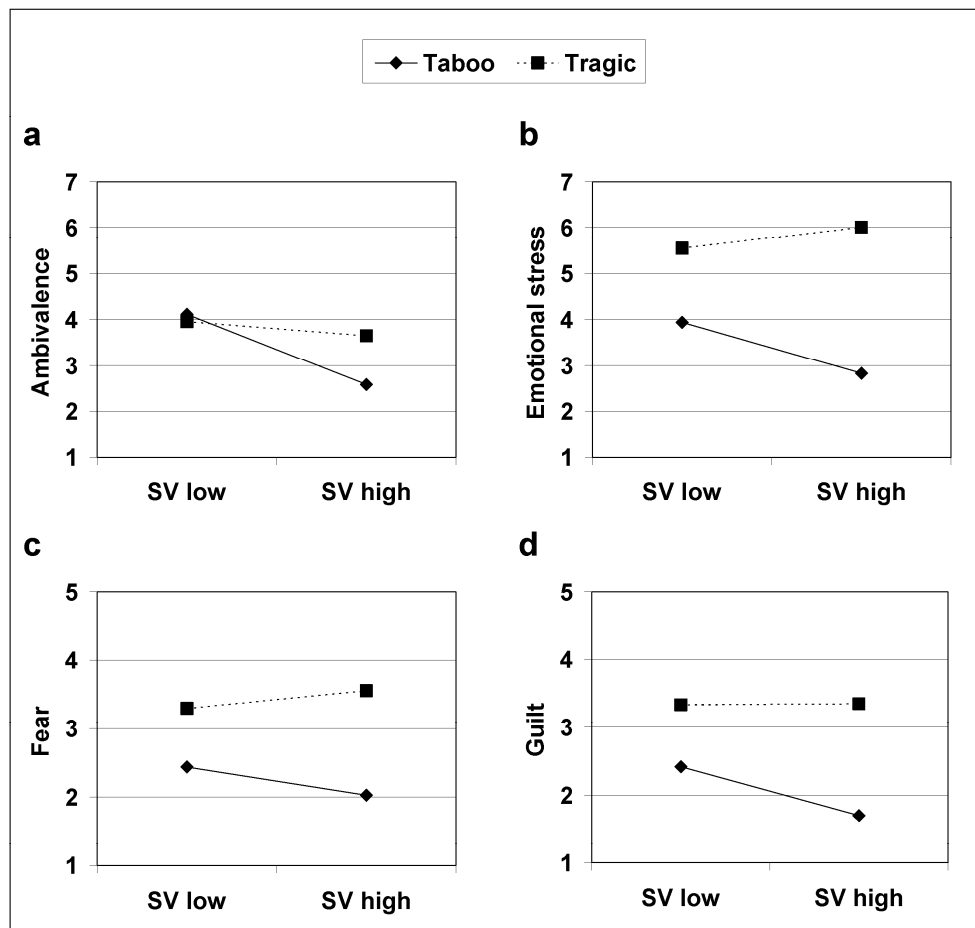


Figure 1. Scale means for (a) ambivalence in Experiment 1, (b) emotional stress in Experiment 2, and (c) fear and (d) guilt in Experiment 3, as a function of sacred value (SV) endorsement and trade-off type. Plots depict means at -1 *SD* and $+1$ *SD* of SV endorsement.

To sum up, Experiments 2 and 3 yielded further support for our expectations. Again, consistent with Hypothesis 1, treating human rights as a sacred value generally augments rejection of torture. Furthermore, results confirm Hypothesis 2, since

participants with high levels of SV demonstrated larger differences between taboo and tragic trade-off scenarios in ambivalence (H2a), emotional stress (H2b), fear (H2c), and guilt (H2d). More specifically, in most cases, we found that differences were based primarily on different reactions to taboo trade-offs. Participants with higher levels of SV showed less ambivalence, stress, fear, and guilt reactions than participants with lower levels of SV in the taboo trade-off condition. However, an inverse pattern emerged in tragic trade-off scenarios, but only with respect to stress and fear. Overall, our findings suggest that given these scenarios, SV are more likely to serve as a facilitator than a barrier in decision making (Hypothesis 3a).

General Discussion

The present research demonstrates that considering human rights – or more specifically, prohibition of torture – as a sacred value strongly shapes cognitive-affective and self-regulation processes which individuals undergo when confronted with choice situations that put the purpose of human rights at risk. The main findings are as follows: Individuals who strongly endorse human rights as a sacred value differ from other people in that they show (1) generally more extreme decisions against torture than individuals with lower levels of sacred value endorsement (i.e., supporting Hypothesis 1), but (2) larger variation in intrapersonal processes (such as ambivalence, emotional stress, fear, and guilt) depending on trade-off type (i.e., supporting Hypotheses 2a-d). (3) We found that these differences were primarily based on different reactions to taboo trade-off scenarios. Specifically, people with higher levels of sacred value endorsement showed less ambivalence, emotional stress, and fear, and fewer guilt reactions in taboo

trade-off scenarios than other participants, while in tragic trade-off scenarios, an inverse pattern emerged, at least for stress and fear ratings (i.e., stronger support for Hypothesis 3a than 3b).

While the results demonstrate how human rights as sacred values are expressed in choices, decisions per se do not reveal anything about the subjective perception of the problem at hand. More importantly, the results show large individual differences in cognitive-affective responses to conflicts, as a function of whether people treat human rights as a sacred value and regarding the type of conflict. Various choice conflicts in which human rights compete with other legitimate or moral requirements (such as national security or saving innocent lives) have largely distinct cognitive and affective implications for people who treat human rights as absolute principles, presumably because conflicts reflect different prospects of succeeding or failing to protect these rights.

Strikingly, differences in individual reactions emerged primarily within taboo trade-off conditions; people with higher levels of sacred value endorsement reported less ambivalence, more emotional relief, and less fear and guilt than individuals with lower levels. These findings strongly support the assumption that sacred values serve as facilitators for decision making. This suggests that individuals who endorse such values benefit from relying on an absolute principle, in that the feasibility of affirming its absolute status reduces negative intrapersonal reactions. As a consequence, they experience less ambivalence, which reflects lower levels of cognitive conflict (cf. Hanze, 2002; Jonas et al., 2000a). This result is in line with previous research showing that taboo trade-offs are perceived as easy to solve and not demanding extensive

thought (Hanselmann & Tanner, 2008; Lichtenstein et al., 2007; Tetlock, 2003), and lend further support to the idea of sacred values working as a heuristic (e.g., Gigerenzer et al., 1999; Haidt, 2001; Sunstein, 2005).

Furthermore, our findings of emotional relief and reduced feelings of fear and guilt highlight the role of emotions and identity-related self-regulation processes when sacred values are at stake. While emotional stress indicates the extent of perceived burden, fear may operate as a specific conflict indicator and as a signal to the individual that something relevant and important is at risk (Damasio, 1994; Finucane et al., 2000; Luce, 1998; Schwarz & Clore, 1996). Beyond this, guilt refers to an emotion associated with moral self-regulation, motivating people to act morally and preventing them from committing a transgression of norms (Frank, 1988; Haidt, 2003; Ketelaar & Au, 2003; Sheikh & Janoff-Bulman, 2010). In other words, guilt may work as a “commitment device”, promoting individuals to affirm the status of moral values at hand. Hence, we interpret our results as indicating that among individuals who endorse sacred values, the mere feasibility of affirming the absolute status of human rights in taboo trade-off scenarios may have led to an emotional relief and a reduction in fear and guilt, and thereby to a protection of central elements of their self-concept and moral identity (cf. Aquino & Reed, 2002).

While our findings clearly confirm the assumption of sacred values serving as facilitators (in taboo trade-off situations), they only partially support the role as a barrier in decision making in tragic trade-off scenarios. In such situations, people are faced with a trade-off of human rights against another important moral requirement (such as saving innocent lives). Based on previous findings showing that tragic trade-off

situations are perceived as very stressful and difficult to solve (Hanselmann & Tanner, 2008), we expected such problems to prompt more ambivalence, distress, fear and guilt for people with higher than with lower levels of sacred values. Nonetheless, the present results show a somewhat different pattern. Indeed, levels of emotional stress and fear slightly increased among individuals who endorse sacred values, presumably because they experienced a stronger burden from this dilemma and perceived human rights as acutely threatened. However, levels of ambivalence and guilt did not increase among these individuals. It may be that our hypothetical scenarios were not vivid enough to evoke stronger reactions – which, at least to a certain degree, is an inherent constraint when examining dilemmas regarding human rights issues under experimental conditions. Alternatively, we speculate that people with strong sacred values may have utilized specific coping mechanisms or cognitive strategies in searching for and justifying an acceptable solution to the tragic dilemma, thereby reducing ambivalence and guilt.

Further research is needed to uncover in more detail how sacred values facilitate decisions, and to clarify the role and possible causal effects of self-regulation processes on decision making. In this regard, it would be interesting to extend the focus to other moral emotions like outrage and disgust, which have also been suggested to play important roles in moral judgment and decision making (e.g., Haidt, 2003; Schnall, Haidt, Clore, & Jordan, 2008), as well as to examine whether such effects are primarily based on intuitive-affective or deliberative processes (Chaiken & Trope, 1999; Greene & Haidt, 2002; Haidt, 2001). From a methodological point of view, a critical issue could have been the use of different points of time at which dependent measures were

taken. Whereas they were assessed in Experiment 1 in advance of making a choice, they were taken retrospectively in Experiments 2 and 3. In future designs, it would seem worthwhile to better consider the time course during decision making and to compare stages prior to and after making the choice. Finally, with regard to contents, it would be interesting to extend the focus to further human rights principles that possibly tap into sacred values and to prove whether our findings can be generalized across a wider range of human rights issues. For instance, the right to freedom of opinion and expression and its universal validity has been repeatedly subject to intense discussions, particularly during the worldwide controversy about Mohammed cartoons published in a Danish newspaper in 2005.

In conclusion, our findings highlight the personal consequences of treating human rights as sacred values and reveal how individuals deal or struggle with situations in which human rights compete with other legitimate or moral requirements. The extent to which individuals consider human rights as absolute and inviolable strongly shapes choices, cognitive-affective conflict dimensions, and self-regulation processes. This research may help to understand what decision makers in real-world settings go through when confronted with choices that tap into (sometimes conflicting) human rights principles: Imagine, for instance, a criminal investigator who has to decide whether to disclose information about a wanted person in order to get hints from the public; or a prison doctor who has to decide whether to apply force feeding in the case of a convict on hunger strike; or a governmental authority that has to decide whether to ban the wearing of burkas in public. Finally, by adopting the proclaimed absolute character as a distinct feature of human rights principles, our research significantly

contributes to the growing body of work on the psychological basis of human rights, moral decision making, and heuristics.

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4. General Discussion

4.1 Summary of Research Objectives and Findings

Human rights, human lives or health, human or animal dignity: These are some prototypical examples of *sacred values*, representing issues or entities that individuals mostly deem as absolute and inviolable, and thus protected from trade-offs with other issues or values. The general goal of my research was to examine what individuals undergo when they are confronted with choices involving sacred values, and to explore the cognitive and affective processes underlying these decisions. Initially, I argued that the extent to which decision makers treat issues or values such as human rights or dignity as sacred values has great implications for intrapersonal choice processes in that they affect the perceived decision difficulty and the experience of negative emotions. Furthermore, I assumed that the structure of the choice conflict (i.e., *trade-off type*) also plays a crucial role regarding these processes.

4.1.1 First Research Project

In my first research project (Hanselmann & Tanner, 2008), I examined whether negative emotions and decision difficulty varied as a function of sacred values and trade-off types (i.e., taboo, tragic, and routine trade-offs). I hypothesized that choices involving sacred values generally elicit negative emotions, and that sacred values may play the role either of facilitators or barriers, dependent on trade-off type, and render decisions easier or more difficult, respectively.

The main findings of this project were as follows: Firstly, choices involving trade-offs that tap into sacred values were generally more negatively emotion-laden than choices which do not refer to sacred values. This was especially true for tragic trade-off scenarios (i.e., situations pitting two sacred values against each other), and to a lesser extent for taboo trade-off scenarios (i.e., situations pitting a sacred value against a secular value). Secondly, the decision difficulty varied as a function of trade-off type. Compared to routine trade-off scenarios (i.e., situations pitting two secular values against each other), choices were experienced as easier when they involved taboo trade-offs, but, inversely, as much more difficult when they involved tragic trade-offs.

Thirdly, findings show a non-linear relationship between negative emotions and decision difficulty. That is, taboo trade-off scenarios were seen as more negatively emotion-laden but easier choice tasks than routine trade-off scenarios. In contrast, tragic trade-off scenarios were experienced as the most stressful and difficult tasks. Overall, these findings suggest that sacred values may play the role of facilitators or barriers, presumably triggering either intuitive or deliberative processes, dependent on trade-off type. Moreover, they strongly suggest that negative emotions may play a distinctive role in scenarios that tap into sacred values.

4.1.2 Second Research Project

Hence, the goal of my second research project (Hanselmann, Tanner, & Duc, 2010) was to explore in more detail cognitive and affective indicators for mechanisms that may reflect the facilitation and barrier effects. Not least due to their officially proclaimed absolute character, this research addressed human rights (or more specifically, prohibition of torture) as a prototypical example of a sacred value. In order to shed light on intrapersonal conflict and self-regulation processes when people are confronted with choices that put the purpose of human rights at risk, cognitive and affective parameters such as experienced ambivalence, emotional stress, fear, and guilt were examined.

The main findings for individuals who strongly endorse human rights as a sacred value, compared to people not endorsing a sacred value, were as follows: Firstly, these people generally showed more extreme choices against the application of torture. Secondly, they revealed larger differences on intrapersonal variables such as experienced ambivalence, emotional stress, fear, and guilt, between taboo and tragic trade-off scenarios. Thirdly, these differences were mainly due to distinct reactions to taboo trade-off situations. In taboo trade-off scenarios, individuals with higher levels of sacred value endorsement showed less ambivalence, emotional stress, fear, and fewer guilt feelings than other individuals. However, in tragic trade-off scenarios, they at least partially showed an inverse pattern, namely for emotional stress and fear. Altogether, these findings confirm the presumed role of sacred values as facilitators in decision

making to a stronger extent than the role as barriers, and provide first evidence for conflict and self-regulation processes when individuals are confronted with choices on sacred issues.

4.2 Discussion of Findings

4.2.1 Sacred Values and Negative Emotions

The findings of my first research project confirm that choice scenarios tapping into sacred values generally elicit negative emotions (Hanselmann & Tanner, 2008). The observation that certain choices and trade-offs are more negatively emotion-laden than others is not really surprising, at least given our experiences of everyday life. However, it contradicts normative views of decision making (e.g., Keeney & Raiffa, 1976), which claim that individuals should always be able to solve all kinds of choices and trade-offs in an equally rational and unemotional manner. In sharp contrast to such a view, my results tend to parallel previous assumptions and findings showing that certain trade-offs are more likely to elicit negative emotions if they pertain to attributes which are related to potentially threatening consequences or highly important goals (e.g., Luce, 1998; Luce et al., 1997). More importantly, they fit in with Tetlock's (2003) assumption that even the *mere contemplation* of choice scenarios involving sacred values may evoke negative feelings of distress and disturbance. Altogether, the findings of my research suggest that emotions may play a crucial role in choices that put sacred values at risk, and go significantly beyond previous research which highlighted the role of emotions in reactions to observed violations of sacred values (e.g., Tetlock et al., 2000). Indeed, merely calling sacred values into question may provoke negative emotions, because the decision maker realizes that something particularly important and delicate is at risk that has to be defended. As I will argue later in more detail, this interpretation would be in line with the assumption of emotions operating as signals or information about potential threats in the current situation (e.g., Damasio, 1994; Schwarz & Clore, 1996).

4.2.2 Sacred Values and Decision Difficulty

Moreover, with regard to the association of trade-off types and decision difficulty, the findings show that taboo trade-off scenarios were perceived as easier to solve compared to routine trade-off scenarios, whereas, conversely, tragic trade-off scenarios were experienced as much more difficult. Inasmuch as these findings are based on participants' *own* decision making, they considerably extend previous research, which focused in a rather indirect manner on the participants' judgments of *other* people's choices (Tetlock et al., 2000). More specifically, previous research found that participants approve of other individuals who perceive taboo trade-off scenarios as easy and tragic trade-off scenarios as difficult tasks, and disapprove of others who, conversely, perceive taboo trade-off scenarios as difficult and tragic trade-off scenarios as easy tasks.

More importantly, as stated above, my findings indicate on the whole that negative emotions and choice difficulty are related in a non-linear fashion, unlike the theory of emotional trade-off difficulty (e.g., Luce, 1998), which suggests a positive association of negative emotions and choice difficulty. In other words, choices touching on sacred values obviously evoke negative emotions, but simultaneously are judged as easy to solve and as not demanding extensive thought in the case of a taboo trade-off (see also Lichtenstein et al., 2007 for similar findings). In contrast, in tragic trade-off scenarios, individuals are forced to choose the lesser of two evils or even to sacrifice a sacred value, which results in both particularly strong negative emotions and high decision difficulty. In sum, these results provide first insights into how sacred values may affect affective and cognitive choice processes when participants are themselves in the role of a decision maker. In particular, they suggest that sacred values may operate as facilitators of decision making under certain conditions (i.e., taboo trade-offs), but as barriers under other conditions (i.e., tragic trade-offs), and that negative emotions may play a distinctive role in both types of conflict. The next sections will address this role in more detail.

4.2.3 Conflict and Self-Regulation Processes

To further explore the effects of sacred values, my second research project took a closer look at intrapersonal conflict and self-regulation processes which individuals undergo when faced with choice scenarios that put sacred values at risk. The findings demonstrate that choice scenarios asking for an application of torture under various conditions have largely distinct implications for individuals who endorse human rights as a sacred value (Hanselmann, Tanner, & Duc, 2010). More precisely, these people showed larger differences between taboo and tragic trade-off scenarios with respect to experienced ambivalence, emotional stress, fear, and guilt, compared to people with lower levels of sacred value endorsements, presumably because these scenarios reflect distinct prospects of succeeding or failing to uphold the absolute status of human rights. Importantly, differences on intrapersonal variables emerged especially in taboo trade-off scenarios. In these situations, people with higher levels of sacred value endorsement exhibited less ambivalence, more emotional relief, and less fear and guilt than people with lower levels. As I will substantiate in the following, this response pattern again strongly supports the presumed role of sacred values serving as facilitators of decision making.

4.2.3.1 Sacred Values as Facilitators

First, the facilitation of the choice process is reflected in lesser experiences of ambivalence. People who endorse human rights as a sacred value may benefit from relying on the absolute character of the sacred value at hand, which helps them to override contradicting but non-absolute arguments simply due to the reluctance of carrying out trade-offs. Thus, the feasibility of affirming the absolute status reduces ambivalence, which reflects lower extents of cognitive conflict (cf. Hänze, 2002; Jonas et al., 2000a). This finding is in line with previous studies demonstrating that taboo trade-off scenarios are perceived as not highly conflict-laden (Mandel & Vartanian, 2007), as particularly easy to solve, and as not demanding extensive consideration (Hanselmann & Tanner, 2008; Lichtenstein et al., 2007; Tetlock et al., 2000).

Furthermore, this finding lends further support to the assumption that sacred values operate as a facilitator of decision making, probably reflecting heuristics (e.g., Gigerenzer et al., 1999; Sunstein, 2005) or intuitive or preconscious processes (e.g., Haidt, 2001; Lapsley & Narvaez, 2004), even though interpretations about the precise underlying mechanisms remain speculative.

Second, the facilitation becomes apparent due to the emotional relief and lesser feelings of fear and guilt. These findings corroborate the role of (moral) emotions and self-regulation processes when sacred values are called into question. While emotional stress may reflect the extent to which individuals generally feel burdened by the task at hand, feelings of fear may indicate how conflict-laden a task is experienced as being, and more specifically, may operate as a signal or information to the decision maker that something delicate and particularly important is at risk, which has to be protected (e.g., Damasio, 1994; Finucane et al., 2000; Loewenstein et al., 2001; Schwarz & Clore, 1983, 1996). Furthermore, guilt represents an important moral emotion that is associated with moral self-regulation, promoting and obligating individuals to act in accordance with moral principles (e.g., Sheikh & Janoff-Bulman, 2010). Guilt has been assumed and shown to operate as a “commitment device”, preventing individuals from committing a violation of social and moral norms which should serve the long-term interests of a group or the society (e.g., Frank, 1988; Haidt, 2003; Ketelaar & Au, 2003). Hence, the findings of my research may indicate that in taboo trade-off scenarios and among people with high sacred value endorsements, the mere feasibility of affirming human rights as absolute principles may have triggered specific self-regulation mechanisms serving the protection of sacred values. Consequently, as sacred values may reflect central parts of one’s moral identity (cf. Aquino & Reed, 2002; Skitka, 2002), such self-regulation mechanisms may have led to a reaffirmation of one’s own moral self-regard and thereby resulted in reduced experiences of emotional stress, fear, and guilt. Section 4.4 will provide some propositions regarding how future research could explore mechanisms underlying facilitation effects in more detail.

4.2.3.2 *Sacred Values as Barriers*

In contrast to taboo trade-off scenarios, in which the role of sacred values as facilitators has been supported, the findings in tragic trade-off scenarios showed a pattern that only partially confirmed the assumed role of sacred values as barriers. In line with my expectations, emotional stress and fear were increased among individuals who endorse sacred values. These findings indicate that individuals perceive the tough dilemma at hand as a particularly strong burden, and see human rights as acutely threatened, because they feel forced to violate a sacred value themselves, no matter what their choice will be.

However, contrary to my expectations, experiences of ambivalence and guilt were not increased. Perhaps the scenario at hand was not sufficiently vivid to evoke a considerable increase on these variables, or more likely, individuals adopted specific cognitive strategies to solve the dilemma, which prevented an increase of ambivalence and guilt. For instance, individuals may have applied coping strategies to justify acceptable solutions of the tragic dilemma despite violating sacred values. Some possibilities to capture such strategies are also outlined in Section 4.4.

4.3 Limitations

4.3.1 Potential Ambiguities With Regard to Concepts and Measures

A major critical issue in both research projects might be, on the one hand, potential ambiguities in theoretical conceptualizations and assumptions, and, on the other hand, inconsistencies in measurement procedures. General negative emotions (in the first project) and, more concretely, fear (in the second project) were assumed to play the role of a signal or information to the decision maker that something important is at risk. This assumption is indeed in line with Tetlock's (2003) notion that merely contemplating taboo trade-offs elicits negative feelings of distress and disturbance, and is similar to the hypothesis of emotions operating as signals in decision making (e.g. Damasio, 1994; Schwarz & Clore, 1996). In accordance with these assumptions, the

results of the first project actually showed that taboo trade-off scenarios are *more* negatively emotion-laden than routine trade-off scenarios. However, in an ostensible contradiction of this pattern, the findings of the second project showed a *reduction* of fear in taboo trade-off scenarios among people with strong sacred value endorsements. My interpretation that the mere feasibility of affirming sacred values may have reduced fear in these people does indeed not necessarily contradict the former assumption of emotions as signals, but reveals a potential ambiguity in these findings and thus a certain problem in their interpretability. This problem may be associated not least with an inconsistency in the methodological procedures used in my research. Whereas in the first project, negative emotions were assessed in advance of the decision, they were measured retrospectively, after the decision, in the second project. In this regard, the use of a retrospective measure could have been problematic because people's retrospective assessments of pre-choice emotions were biased precisely because sacred values could be reaffirmed by choosing appropriately. Accordingly, the pattern of results for ambivalence and guilt that emerged in tragic trade-off scenarios could also be explained by a similar retrospective bias. Possibly, individuals may have used emotion-focused coping strategies to protect their self-image after having made the choice, or may have searched for post-hoc justifications for their decision, which dampened their retrospective ratings of ambivalence and guilt. Hence, in order to better trace processes along the time course and to prevent retrospective biases, it would be necessary for future research to take measures at several given time points and to compare stages prior to and after making the choice. For instance, emotions could be assessed repeatedly by requiring people to report their emotional status using a slider at several time points of the decision process (see e.g. Luce, 1998, for similar arguments and procedures).

In a similar vein, future studies should draw better conceptual distinctions between specific negative emotions and disentangle their assumed functions. It is likely that emotional stress and fear (which actually showed a parallel pattern in my research) may mainly reflect individuals' affective state when they are confronted with tragic trade-offs that force them to sacrifice one of the sacred values or to search exhaustively for an alternative solution of the hard dilemma. In contrast, but conceptually more similar to Tetlock's (2003) assumptions, an unspecific and rather incomprehensible

state of negative affect, which reflects disturbance and nervousness, may possibly better account for initial signals to the decision maker that sacred values are at risk. Such a more generalized conceptualization of negative affect would also have more affinity with the concept of somatic markers representing mainly unspecific bodily sensations such as visceral reactions or changes in heartbeat (Damasio, 1994), as well as with the notion of “gut” feelings with regard to moral intuition (Haidt, 2001). Alternatively, it is also recommendable to focus on specific moral emotions such as disgust as possibly crucial emotions in people who are merely contemplating choices on sacred values (cf. Rozin et al., 1999; Schnall et al., 2008; Wheatley & Haidt, 2005).

In any case, in order to better comprehend the causal roles of emotions and disentangle their functions during the choice process, it seems worthwhile to selectively manipulate the influence of emotions using an affective priming procedure or a misattribution paradigm. Such possibilities will be discussed in more detail in Section 4.4.

4.3.2 Generalizability of Findings

Another possibly critical issue in my research may be the external validity due to the exclusive focus on student samples. As decisions on sacred values, especially delicate tragic trade-offs, are seldom part of the everyday life of “naive” students, future research should extend the range of samples on decision makers in real-world settings such as politicians, legal or medical practitioners, scientists, and businesspeople. Accordingly, it would also be worthwhile to extend the focus to further topics that possibly tap into sacred values, such as different human rights issues, ethical considerations in biological sciences, or business decisions.

In this vein, it is important to note that sacred values do not necessarily represent normative principles that are generally shared across individuals and cultures. Indeed, certain issues or entities such as human dignity and lives or human rights may be, at least in Western societies, consensually perceived as sacred values. Nonetheless, sacred values and trade-off reluctance may also reflect rather subjective phenomena that reveal large interindividual variations with regard to relevant domains, focal situations, and

presumably psychological consequences (cf. Bauman & Skitka, 2009 for a similar argumentation with respect to moral convictions). Hence, without touching on a nature-nurture debate with respect to sacred values, I believe that the mechanisms behind sacred values and trade-off reluctance may, to a certain degree, be based on a set of evolved and innate hard-wired “moral modules” (cf. Haidt & Bjorklund, 2008), particularly in terms of consensually shared sacred issues such as human lives or integrity. However, sacred values may, probably to a much stronger extent, be the result of learning, enculturation, and personal experience (cf. Lapsley & Hill, 2008). Overall, it seems particularly worthwhile and important to explore the generalizability regarding the subjective experiences and consequences of sacred values on decision making across different social groups, cultures, and domains.

4.3.3 Forced Choice Paradigm

A final criticism concerns the forced choice paradigm that was used in my research, providing a set of two clear-cut alternatives whose ecological validity is at least questionable. On the one hand, such a procedure may be rather prone to tendencies of social desirability and demand characteristics (probably mostly in the case of taboo trade-off scenarios). On the other hand, in tragic trade-off scenarios, it forces the individual to violate a sacred value even though in real-world settings, creative solutions and “third ways”, apart from simply avoiding the dilemma, are also conceivable.

Future research should therefore develop designs that allow processes and choices to be captured in a more subtle and less suggestive manner, and to observe participants’ active search for information, guidance of selective attention, generation of their own arguments, and so on. Such a design could be implemented through modifiable and interactive computer software (e.g., Mouselab; Payne et al., 1993), which allows participants’ information acquisitions and response times to be monitored or their guidance of attention to be tracked.

4.4 Outlook

Although my research shed some initial light on cognitive and affective processes which people undergo when confronted with decisions tapping into sacred values, the precise nature of mechanisms underlying such decisions and the causal role of the examined variables need to be analyzed more thoroughly. In the following, I will present some theoretical and methodological considerations regarding these issues for future research.

4.4.1 Indirect Indicators

With regard to the effects of sacred values and their presumed association with intuitive or deliberative processes, it is advisable to address additional variables as indirect indicators for the mechanisms which take place during the choice process. For instance, the level of experienced *confidence* in making the right choice may be an appropriate indicator for whether rapid and intuitive processes or slow effortful processes to reach a decision occurred. According to previous findings showing that intuitive choosing is associated with high confidence (e.g., Simmons & Nelson, 2006), it may be assumed that taboo trade-off choices will result in higher levels of experienced confidence than tragic trade-off choices (cf. Mandel & Vartanian, 2007).

In a similar vein, the level of experienced *satisfaction* after having made a choice may indicate whether individuals relied on their intuitive “gut” feelings or whether they adopted more extensive strategies to reach a choice. In line with research demonstrating that reliance on intuitions and feelings may result in greater satisfaction than extensively analyzing reasons and weighing costs and benefits (e.g., Iyengar, Wells, & Schwartz, 2006; Wilson, Lisle, Schooler, Hodges, Klaaren, & LaFleur, 1993), it may be expected that taboo trade-off choices will evoke more post-choice satisfaction than tragic trade-off choices.

4.4.2 Mechanisms Reflecting Facilitation and Barrier Effects

Most importantly, it is recommendable to focus more directly on whether rather intuitive, effortless or deliberative, effortful processes take place. By using specific experimental procedures to selectively explore underlying mechanisms of such processes, it should be possible to look more closely at the roles of emotions as signals (e.g., Schwarz & Clore, 1996), somatic markers (e.g., Damasio, 1994), disgust as intuitive “gut” feelings (e.g., Schnall et al, 2008), emotions as commitment devices and self-regulation (e.g., Ketelaar & Au, 2003; Sheikh & Janoff-Bulman, 2010), implicit moral knowledge (e.g., Narvaez & Lapsley, 2005), cognitive strategies that should help to overcome barriers in moral dilemmas (e.g., Hänze, 2002), and imaging brain activities dedicated to specific affective and cognitive processes in moral decision making (e.g., Greene et al., 2004). In the following, I will provide some research propositions.

4.4.2.1 *Emotion as Signals and Somatic Markers*

In terms of emotions as signals, a misattribution paradigm may be utilized to selectively control for the reliance on emotions as signals by manipulating their subjective validity for the choice at hand (e.g., Pham, 1998). More specifically, by increasing the salience of an alleged source of arousal or negative affect, participants can be led to misattribute their current affective status being associated with the choice issue to the other alleged source, thereby mitigating the influence of the current emotions as valid signals about the choice situation. As a consequence, such participants no longer rely on these emotions as helping signals due to their lost validity, which, in turn, should make choices less easy and straightforward. In a recent student research study conducted under my supervision (Derungs & Steiger, 2009), a misattribution paradigm similar to that used by Pham (1998) was applied in the context of sacred values and taboo trade-offs. To manipulate the salience of the alleged source of arousal, certain potentially arousing pieces of music were played in the background at a rather low volume level during the choice task. In short, the results showed that the

salience manipulation had no effect on the dependent variables (e.g., choice extremity, confidence, satisfaction, etc.), which were assessed as indicators for effects of emotions as signals in taboo trade-off scenarios. To explain this finding, it can be assumed that the null effect may have been due to a failure to provide an appropriate and reliable stimulus as a plausible source of arousal. Importantly, according to Pham, decision makers only rely on emotions as signals if they perceive these feelings as actually *representative* and *relevant* for the choice target at hand. Hence, it is plausible to interpret the finding by Derungs and Steiger insofar as the alleged source of arousal (i.e., music) did not match with the choice target sufficiently well (i.e., taboo trade-off) in terms of the precise nature and subjective significance of the respective emotions each elicits. Future research should improve this match by better selecting and testing stimuli of arousal.

Then, in terms of somatic markers, an experimental procedure providing either false or real physiological feedback as signals to the decision maker would possibly help to overcome the mentioned matching problem related to the misattribution paradigm. Procedures addressing somatic markers have already been applied successfully with respect to value-relevant decision making (e.g., Batson et al., 1999).

Finally, in terms of specific moral emotions as intuitive “gut” feelings, it would be worthwhile to use an affective priming procedure to examine disgust as a possible determinant of facilitation (e.g., Schnall et al., 2008; Wheatley & Haidt, 2005).

4.4.2.2 *Emotions as Commitment Devices and Self-Regulation*

In terms of emotions as commitment devices and moral-self regulation, a procedure using sequential choice tasks similar to that of Ketelaar and Au (2003) would allow the observation of how individuals deal with violations of sacred values committed by themselves. In other words, people’s responses in two sequential tasks could be assessed and compared, and the role of guilt feelings as a possible mediator between the two tasks could be examined. For instance, it is conceivable to present participants in the first task with a tragic trade-off scenario in which they are requested to violate a sacred value. Subsequently, after an assessment of guilt feelings

representing the mediator, they could be provided with a second task in which they are given the opportunity to reaffirm the sacred value that they had violated in the first task. In addition, such a procedure using two sequential tasks would allow an exploration of the role of moral cleansing as a regulatory mechanism and moral identity operating as an individual “ideal” moral self.

Alternatively, using a priming of guilt combined with a misattribution paradigm, the mediating role of guilt as a commitment device regarding the protection of sacred values could be examined in a more controlled manner.

4.4.2.3 Implicit Moral Concepts and Preconscious Processing

Moreover, in terms of sacred values as implicit moral concepts, an experimental design could be used which compares whether implicit or explicit concepts have a stronger impact on decision making in taboo trade-off scenarios. As a measure of the implicit components associated with sacred values, a form of the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) could be applied. In a similar vein, Marquardt (2010) examined the relative impacts of implicit and explicit forms of moral attitudes on various processes in managerial decision making (e.g., choices that involved a trade-off of product safety against cutting costs). Prior to asking participants how they would choose, implicit and explicit attitudes toward the issues associated with the trade-off at hand were assessed using an IAT and an ordinary questionnaire, respectively. In brief, both measures assessed how moral or immoral individuals judge issues to be that potentially tap into *moral* considerations (e.g., safety, health protection, life), and how moral or immoral they judge issues to be that potentially tap into *monetary* considerations (e.g., money, profitability, sales), in order to subsequently compare these two kinds of judgments. The results showed that implicit assessments predicted resulting choices and the preceding stages of the choice process such as moral sensitivity, selective attention, or intentions, to a much stronger extent than explicit assessments. Although this research did not refer explicitly to distinct characteristics of sacred values, it emphasizes the relevance and power of implicit concepts and preconscious processes on choices similar to taboo trade-off scenarios.

As an alternative approach to explore the role of preconscious processes, it would be interesting to use a semantic priming procedure in order to selectively strengthen or inhibit the accessibility of implicit moral beliefs such as “inviolability” or “dignity”, or potentially incongruent and interfering schemata such as “money” or “cost-benefit considerations”, in order to detect interferences when assessing processes or reaction times in subsequent tasks.

4.4.2.4 *Cognitive Strategies*

In terms of cognitive strategies to overcome barriers in tragic trade-off scenarios, the concept of *emotional amplification* should be considered and explored (e.g., Hänze, 2002). Emotional amplification is a form of problem-focused coping which is often applied by individuals confronted with highly ambivalent and stressful decision scenarios. It encompasses a wide range of cognitive strategies and aims to polarize individuals’ preference hierarchies by building up associations of choice options with clear-cut affective evaluations. For instance, individuals apply strategies such as search for new information in order to obtain additional affective cues, dominance structuring (e.g., bolstering, spreading apart), or mental simulation (i.e., vivid imagination of the consequences of each choice option). In order to track such processes, it will be necessary to widen the range of choice alternatives or to open up the space for creative solutions (see Section 4.3.3).

4.4.2.5 *Brain Imaging*

Finally, in terms of brain activities, studies using fMRI might be able to gain more comprehensive insights into the processes in individuals who are presented with taboo and tragic trade-off scenarios. In this vein, a recent collaborative research project found several distinctive patterns of brain activities, which nicely reflect psychological processes underlying taboo and tragic trade-off scenarios (Duc, Hanselmann, Tanner, & Boesiger, 2010). In short, taboo trade-off scenarios triggered activities in brain areas which are assumed to be linked to emotion-driven facilitation of behavior (e.g., the right

amygdala) and to processes such as retrieval of social knowledge and social cognition (e.g., anterior parts of the left temporal lobe). In contrast, tragic trade-off scenarios engaged activities in areas which are assumed to be linked to fear reactions and the processing of cognitive conflict (e.g., the left amygdala, the anterior insulae, and parts of the prefrontal cortex); moreover, they triggered mechanisms which may serve the inhibition of the aforementioned taboo-related processes. Overall, these findings lend further support to my assumption that sacred values and taboo trade-offs involve affective processes as well as cognitive beliefs, while tragic trade-offs engage conflict processing and inhibit initial taboo reactions, in order to overcome the barrier to reaching acceptable solutions.

4.5 Conclusion

Public debates on a large variety of topics such as torture, assisted suicide, research on stem cells using human embryos, force feeding in cases of hunger strike, or the wearing of burkas in public reveal that sacred values are omnipresent sources of heated controversy. However, intrapersonal consequences of sacred values in decision making have mostly been neglected in previous research. My research aimed to contribute to a better comprehension of what individuals undergo when confronted with choices tapping into sacred values. The findings demonstrate that sacred values considerably shape decision making in terms of decision difficulty, emotions, and conflict and self-regulation processes. Specifically, the results show that sacred values may facilitate decision making in certain taboo scenarios by rejecting trade-offs and by helping individuals to choose in accordance with sacred values, and suggest that emotions may play distinctive roles in this regard. Furthermore, they show that decision makers often severely struggle to reach choices, especially when they are confronted with tragic dilemmas. Future studies are needed to better comprehend the precise nature of the processes underlying choices on sacred values. In the long term, the fruits of this research will possibly allow a greater understanding of *why* decision makers in real-world settings decide in one way and not another, and to instruct and advise such decision makers on *how* to reach good solutions, especially in cases of tragic dilemmas.

5. References

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6. Appendix

6.1 Appendix to the Manuscript Hanselmann & Tanner (2008)

6.1.1 Experiment 1: Decision Scenarios

6.1.1.1 Taboo Trade-Off “Flood Protection”

Stellen Sie sich vor, Sie seien Mitglied einer Gemeindebehörde. Ihre Gemeinde wurde vom Hochwasser des vergangenen Sommers arg in Mitleidenschaft gezogen. Da sie sich in einer gefährdeten Zone befindet, sind in Zukunft weitere Hochwasser nicht auszuschliessen.

Es wird diskutiert, ob ein bedeutender Teil des Jahresbudgets in die Verbesserung des Hochwasserschutzes investiert werden soll. Dafür müsste jedoch auf eine geplante Verschönerung des Dorfplatzes verzichtet werden.

Sie als Behördenmitglied stehen nun vor einer Entscheidung mit folgenden Alternativen:

A: Verbesserung des Hochwasserschutzes

oder

B: Verschönerung des Dorfplatzes

6.1.1.2 Taboo Trade-Off “Safety at Work”

Stellen Sie sich vor, Sie seien Mitglied der Geschäftsleitung einer global tätigen Firma. Eine Menschenrechtsorganisation wirft Ihnen vor, dass die Angestellten der Niederlassung in China unter miserablen Bedingungen arbeiten müssen (unzumutbar hohe Lufttemperaturen, Kontakt mit giftigen Chemikalien etc.). Um einen Imageverlust Ihrer Firma zu vermeiden, müssen Sie handeln.

Die Verbesserung der Arbeitsbedingungen bedeutet aber grosse Investitionen. Sie sehen sich gezwungen, hierzu einen deutlichen Rückgang des Gewinns in Kauf zu nehmen. Auf diese Weise würde das Ziel einer jährlichen Gewinnsteigerung verfehlt.

Sie als Geschäftsleitungsmitglied stehen nun vor einer Entscheidung mit folgenden Alternativen:

A: Verbesserung der Arbeitsbedingungen

oder

B: Steigerung des Gewinns

6.1.1.3 *Tragic Trade-Off “Flood Protection”*

Stellen Sie sich vor, Sie seien Mitglied einer Gemeindebehörde. Ihre Gemeinde wurde vom Hochwasser des vergangenen Sommers arg in Mitleidenschaft gezogen. Da sie sich in einer gefährdeten Zone befindet, sind in Zukunft weitere Hochwasser nicht auszuschliessen.

Es wird diskutiert, ob ein bedeutender Teil des Jahresbudgets in die Verbesserung des Hochwasserschutzes investiert werden soll. Dafür müsste jedoch auf ein geplantes Weiterbildungs- und Integrationsprojekt für arbeitslose Jugendliche verzichtet werden.

Sie als Behördenmitglied stehen nun vor einer Entscheidung mit folgenden Alternativen:

A: Verbesserung des Hochwasserschutzes	oder	B: Weiterbildungs- und Integrationsprojekt für arbeitslose Jugendliche
---	------	---

6.1.1.4 *Tragic Trade-Off “Safety at Work”*

Stellen Sie sich vor, Sie seien Mitglied der Geschäftsleitung einer global tätigen Firma. Eine Menschenrechtsorganisation wirft Ihnen vor, dass die Angestellten der Niederlassung in China unter miserablen Bedingungen arbeiten müssen (unzumutbar hohe Lufttemperaturen, Kontakt mit giftigen Chemikalien etc.). Um einen Imageverlust Ihrer Firma zu vermeiden, müssen Sie handeln.

Die Verbesserung der Arbeitsbedingungen bedeutet aber grosse Investitionen. Sie sehen sich gezwungen, hierzu eine Entlassung von rund einem Drittel der betroffenen Belegschaft in Kauf zu nehmen. Auf diese Weise würde die Existenz vieler Familien gefährdet.

Sie als Geschäftsleitungsmitglied stehen nun vor einer Entscheidung mit folgenden Alternativen:

A: Verbesserung der Arbeitsbedingungen	oder	B: Erhalt der Arbeitsplätze
---	------	------------------------------------

6.1.1.5 Routine Trade-Off “Job Offer”

Stellen Sie sich vor, Sie sind als Elternteil allein für den finanziellen Unterhalt Ihrer dreiköpfigen Familie zuständig. Sie haben sich bei verschiedenen Firmen für eine neue Stelle beworben. Bei zwei Firmen könnten Sie die Stelle haben.

Bei Firma A bekämen Sie einen Lohn von 80'000 Franken im Jahr und hätten 4 Wochen Ferien zu Gute, während Sie bei Firma B einen Lohn von 60'000 Franken und 6 Wochen Ferien erhielten. Ansonsten sind die Firmen und die Stellenangebote sehr ähnlich, sie entsprechen beide Ihren Fähigkeiten und Bedürfnissen.

Sie stehen nun vor einer Entscheidung mit folgenden Alternativen:

**A: Stelle mit höherem Lohn
(Firma A)**

oder

**B: Stelle mit mehr Ferienwochen
(Firma B)**

6.1.2 Experiment 1: Recruitment of Participants

Note. Participants were recruited by advertisements in several study courses. This was done in cooperation with Bettina Ryf, who was conducting another line of experiments.

6.1.2.1 Overhead Transparency



Universität Zürich
Psychologisches Institut, Kognitive Sozialpsychologie

TeilnehmerInnen gesucht!

Aktuelle gesellschaftliche Themen:

Eine Serie von Entscheidungsexperimenten ...

... auf individueller Ebene	... auf Gruppenebene
(Persönliche Meinungen in Entscheidungskonflikten)	(Verhandlungsspiel)
Zeitaufwand: 25 min	Zeitaufwand: 50-60 min
Anrechnung einer ½ Versuchs- personnenstunde	Anrechnung einer Versuchspersonenstunde

Was bringt dir eine Teilnahme ausserdem?

- Jeweils Verlosung von 3x100 CHF unter den Teilnehmern
- Gutschein vom Cafe Sento, an der Zürichbergstrasse 19
- Einblick in experimentelle Sozialforschung

Ort: Plattenstrasse 32 (5 min von Hauptgebäude entfernt)

Bettina Ryf (bettina.ryf@psychologie.unizh.ch)

Martin Hanselmann (martin.hanselmann@psychologie.unizh.ch)

→ www.psychologie.unizh.ch/cognisoz

6.1.3 Experiment 1: Paper-and-Pencil Questionnaire

Note. Below, the general procedure of the questionnaire using one selected decision scenario is shown. The other scenarios followed the same procedure. In some cases, response scales have been recoded for the purpose of the manuscript. Items which do not pertain to the research reported here are omitted.

6.1.3.1 Introduction

VPNR: _____

Liebe Teilnehmerin, lieber Teilnehmer

Herzlichen Dank für Ihre Teilnahme an unserer Studie zum Thema Entscheidungsprozesse!

Ihnen werden 3 verschiedene **Szenarien** präsentiert, welche jeweils eine **Entscheidungssituation** beinhalten. Bitte versuchen Sie in jedem Fall so gut wie möglich, sich in die jeweilige Situation des Szenarios **hinein zu versetzen**, als müssten Sie tatsächlich die entsprechende Entscheidung fällen – und beantworten Sie dann eine Reihe von **Fragen** zu den Szenarien.

Es gibt keine richtigen oder falschen Antworten, uns interessiert Ihre persönliche Meinung. Ihre Antworten werden streng **vertraulich** und **anonym** behandelt.

Der Zeitaufwand beträgt ca. 25 Minuten.

Wenn Sie Fragen zum Vorgehen oder zum Verständnis haben, wenden Sie sich bitte an die Untersuchungsleiterin.

Zuerst ein paar persönliche Angaben:

Alter: _____

Geschlecht: ☐ männlich

☐ weiblich

Studienfach / Beruf: _____

6.1.3.2 Scenario: Taboo Trade-Off “Flood Protection”

VPNR: _____

Stellen Sie sich vor, Sie seien Mitglied einer Gemeindebehörde. Ihre Gemeinde wurde vom Hochwasser des vergangenen Sommers arg in Mitleidenschaft gezogen. Da sie sich in einer gefährdeten Zone befindet, sind in Zukunft weitere Hochwasser nicht auszuschliessen.

Es wird diskutiert, ob ein bedeutender Teil des Jahresbudgets in die Verbesserung des Hochwasserschutzes investiert werden soll. Dafür müsste jedoch auf eine geplante Verschönerung des Dorfplatzes verzichtet werden.

Sie als Behördenmitglied stehen nun vor einer Entscheidung mit folgenden Alternativen:

**A: Verbesserung des
Hochwasserschutzes**

oder

B: Verschönerung des Dorfplatzes

Bitte legen Sie dieses Blatt so zur Seite, dass Sie es weiterhin in Ihrem Blickfeld haben, und beginnen Sie mit der Beantwortung der ersten Frage auf der nächsten Seite.

Inwieweit stimmen Sie mit folgenden Aussagen überein?

Verbesserung des Hochwasserschutzes: Hierbei geht es um etwas, ...

[illegible][illegible][illegible][illegible]

Inwieweit stimmen Sie mit folgenden Aussagen überein?

Verschönerung des Dorfplatzes: Hierbei geht es um etwas, ...

... bei dem sich meine Haltung im Verlauf der Zeit ändern könnte.

[illegible]

... bei dem ich meine Meinung nicht ändern werde, koste es was es wolle.

[illegible]

... bei dem ich Mühe hätte, Zugeständnisse zu machen.

[illegible]

... das man unter allen Umständen verteidigen sollte.

[illegible]

Bitte versetzen Sie sich nochmals in die Situation, um danach die Entscheidung abzugeben. Zur Erinnerung ist sie hier nochmals aufgeführt.

Stellen Sie sich vor, Sie seien Mitglied einer Gemeindebehörde. Ihre Gemeinde wurde vom Hochwasser des vergangenen Sommers arg in Mitleidenschaft gezogen. Da sie sich in einer gefährdeten Zone befindet, sind in Zukunft weitere Hochwasser nicht auszuschliessen.

Es wird diskutiert, ob ein bedeutender Teil des Jahresbudgets in die Verbesserung des Hochwasserschutzes investiert werden soll. Dafür müsste jedoch auf eine geplante Verschönerung des Dorfplatzes verzichtet werden.

Sie als Behördenmitglied stehen nun vor einer Entscheidung mit folgenden Alternativen:

A: Verbesserung des Hochwasserschutzes

oder

B: Verschönerung des Dorfplatzes

Ich entscheide mich...

A: klar für die
Verbesserung des
Hochwasserschutzes

-3
☐

-2
☐

-1
☐

weder noch

0
☐

1
☐

2
☐

3
☐

B: klar für die
Verschönerung des
Dorfplatzes

Wie schwierig oder leicht ist Ihnen diese Entscheidung gefallen?

sehr leicht

1
☐

2
☐

3
☐

mittelmässig

4
☐

5
☐

6
☐

sehr schwer

7
☐

6.1.3.3 Conclusion

Information zur Untersuchung

Unser Forschungsprojekt befasst sich mit dem Phänomen, dass sich Menschen bei bestimmten Themen weigern, Kosten-Nutzen-Abwägungen zu machen und Kompromisse einzugehen. Es handelt sich um Werte, welche als absolut und nicht kompensierbar wahrgenommen werden. Sie werden deshalb „geschützte Werte“ genannt. Beispiele für solche Werte sind: Sicherheit der Menschen, Schutz der Gesundheit, Schutz der Natur, Gerechtigkeit, Recht auf ein Leben in Würde etc.

Die vorliegende Studie untersucht spezifische Entscheidungssituationen, welche solche Werte und Themen ansprechen. Hypothese: Je nach Konstellation der Entscheidungsalternativen kann beim Individuum ein subjektiver Konflikt zwischen (geschützten) Werten entstehen, welcher die Entscheidungsfindung erschwert und eine emotionale Belastung bewirkt. Diese Prozesse stehen im Fokus des Experiments.

Für Fragen und Kommentare können Sie mich gerne kontaktieren.

Martin Hanselmann

martin.hanselmann@psychologie.unizh.ch

Herzlichen Dank!

Als Dankeschön nehmen Sie an einer **Verlosung von 3 mal 100 Franken** unter allen TeilnehmerInnen dieser Studie teil. Bitte geben Sie uns unten Ihre Kontaktangaben an, damit wir Sie im Gewinnfall benachrichtigen können. Alle diese Angaben werden **vertraulich** behandelt und getrennt von Ihren Antworten aufbewahrt.

Wenn Sie an einer Zusammenfassung der **Resultate** interessiert sind, werden wir diese ebenfalls an ihre untenstehende Adresse schicken.

Dürfen wir Sie **wieder mal für eine Teilnahme** an einer Untersuchung in unserem Projekt anfragen? Darüber würden wir uns sehr freuen!

- ☐ Ja, bin interessiert an den Resultaten
- ☐ Ja, Sie können mich für eine weitere Untersuchung anfragen

Kontaktangaben (werden vertraulich behandelt)

Name:

E-Mail:

Telefon:

Adresse, Ort (fakultativ):

6.1.4 Experiment 2: Decision Scenarios

Note. Each scenario consisted of three parts, and these parts were provided sequentially: (1) Presentation of the first option, (2) presentation of the second option, and (3) presentation of the final decision situation.

6.1.4.1 Taboo Trade-Off “Flood Protection”

(1)

Stellen Sie sich vor, Sie seien Präsident einer sechsköpfigen Gemeindebehörde. Ihre Gemeinde wurde von einem starken Hochwasser arg in Mitleidenschaft gezogen. Da sie sich in einer gefährdeten Zone befindet, sind in Zukunft weitere Hochwasser nicht auszuschliessen.

Sie nehmen nun an einer Sitzung der Gemeindebehörde teil. Dort wird diskutiert, ob Massnahmen zur Verbesserung des Hochwasserschutzes ergriffen werden sollen.

Sie als Behördenmitglied müssen sich nun Ihren Standpunkt zur Verbesserung des Hochwasserschutzes überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(2)

Sie befinden sich noch immer an der Sitzung der Gemeindebehörde. Vor der Schlussabstimmung werden noch andere Themen diskutiert.

Der Dorfplatz ist der geografische und soziale Mittelpunkt Ihrer Gemeinde und befindet sich zunehmend in einem unschönen Zustand, wie die vielen wild parkierten Autos und der löchrige Strassenbelag zeigen. An der Sitzung wird deshalb diskutiert, ob Massnahmen zur Verschönerung des Dorfplatzes ergriffen werden sollen.

Sie als Behördenmitglied müssen sich nun Ihren Standpunkt zur Verschönerung des Dorfplatzes überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(3)

An der Schlussabstimmung werden beide Vorschläge, nämlich die Verbesserung des Hochwasserschutzes und die Verschönerung des Dorfplatzes gutgeheissen.

Der ebenfalls anwesende Kassenwart Ihrer Gemeinde meldet nun aber, dass nicht genügend Geld für beide Vorschläge vorhanden sei. Eine weitere Abstimmung darüber, welcher der beiden Vorschläge bevorzugt werden soll, endet mit einem Resultat von 3 zu 3 Stimmen.

Nun müssen Sie als Präsident der Gemeindebehörde den Stichentscheid fällen. Sie stehen also vor der Entscheidung zwischen folgenden Alternativen:

A Verbesserung des Hochwasserschutzes	oder	B Verschönerung des Dorfplatzes
--	------	--

6.1.4.2 Taboo Trade-Off “Safety at Work”

(1)

Stellen Sie sich vor, Sie seien der Vorsitzende der Geschäftsleitung einer global tätigen Firma. Eine Menschenrechtsorganisation wirft Ihnen vor, dass die Angestellten der Niederlassung in China unter miserablen Bedingungen arbeiten müssen (unzumutbar hohe Lufttemperaturen, Kontakt mit giftigen Chemikalien etc.).

Sie nehmen nun an einer Sitzung der Geschäftsleitung teil. Dort wird diskutiert, ob Massnahmen zur Verbesserung der Arbeitsbedingungen ergriffen werden sollen.

Sie als Mitglied der Geschäftsleitung müssen sich nun Ihren Standpunkt zur Verbesserung der Arbeitsbedingungen überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(2)

Sie befinden sich noch immer an der Sitzung der Geschäftsleitung. Vor der Schlussabstimmung werden noch andere Themen diskutiert.

Ihre Firma gerät zunehmend unter Preisdruck, weil die Konkurrenz in grösseren Mengen produzieren kann. An der Sitzung wird deshalb vorgeschlagen, die Produktion mit zusätzlichen Maschinen zu steigern, um die Preise senken zu können.

Sie als Mitglied der Geschäftsleitung müssen sich nun Ihren Standpunkt zur Steigerung der Produktion überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(3)

An der Schlussabstimmung werden beide Vorschläge, nämlich die Verbesserung der Arbeitsbedingungen und die Steigerung der Produktion gutgeheissen.

Der ebenfalls anwesende Finanzchef Ihrer Firma meldet nun aber, dass nicht genügend Geld für beide Vorschläge vorhanden sei. Eine weitere Abstimmung darüber, welcher der beiden Vorschläge bevorzugt werden soll, endet mit einem Resultat von 3 zu 3 Stimmen.

Nun müssen Sie als Vorsitzender der Geschäftsleitung den Stichentscheid fällen. Sie stehen also vor der Entscheidung zwischen folgenden Alternativen:

A Verbesserung der Arbeitsbedingungen	oder	B Steigerung der Produktion
--	------	--

6.1.4.3 Tragic Trade-Off “Flood Protection”

(1)

Stellen Sie sich vor, Sie seien Präsident einer sechsköpfigen Gemeindebehörde. Ihre Gemeinde wurde von einem starken Hochwasser arg in Mitleidenschaft gezogen. Da sie sich in einer gefährdeten Zone befindet, sind in Zukunft weitere Hochwasser nicht auszuschliessen.

Sie nehmen nun an einer Sitzung der Gemeindebehörde teil. Dort wird diskutiert, ob Massnahmen zur Verbesserung des Hochwasserschutzes ergriffen werden sollen.

Sie als Behördenmitglied müssen sich nun Ihren Standpunkt zur Verbesserung des Hochwasserschutzes überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(2)

Sie befinden sich noch immer an der Sitzung der Gemeindebehörde. Vor der Schlussabstimmung werden noch andere Themen diskutiert.

Ihre Gemeinde sieht sich seit längerer Zeit mit einer zunehmenden Jugendgewalt- und Delinquenzproblematik konfrontiert. An der Sitzung wird deshalb diskutiert, ob ein Weiterbildungs- und Integrationsprojekt für arbeitslose Jugendliche aufgebaut werden soll, um dieser Problematik zu begegnen.

Sie als Behördenmitglied müssen sich nun Ihren Standpunkt zum Weiterbildungs- und Integrationsprojekt für arbeitslose Jugendliche überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(3)

An der Schlussabstimmung werden beide Vorschläge, nämlich die Verbesserung des Hochwasserschutzes und das Weiterbildungs- und Integrationsprojekt für arbeitslose Jugendliche gutgeheissen.

Der ebenfalls anwesende Kassenwart Ihrer Gemeinde meldet nun aber, dass nicht genügend Geld für beide Vorschläge vorhanden sei. Eine weitere Abstimmung darüber, welcher der beiden Vorschläge bevorzugt werden soll, endet mit einem Resultat von 3 zu 3 Stimmen.

Nun müssen Sie als Präsident der Gemeindebehörde den Stichentscheid fällen. Sie stehen also vor der Entscheidung zwischen folgenden Alternativen:

A

**Verbesserung des
Hochwasserschutzes**

oder

B

**Weiterbildungs- und
Integrationsprojekt für
arbeitslose Jugendliche**

6.1.4.4 Tragic Trade-Off “Safety at Work”

(1)

Stellen Sie sich vor, Sie seien der Vorsitzende der Geschäftsleitung einer global tätigen Firma. Eine Menschenrechtsorganisation wirft Ihnen vor, dass die Angestellten der Niederlassung in China unter miserablen Bedingungen arbeiten müssen (unzumutbar hohe Lufttemperaturen, Kontakt mit giftigen Chemikalien etc.).

Sie nehmen nun an einer Sitzung der Geschäftsleitung teil. Dort wird diskutiert, ob Massnahmen zur Verbesserung der Arbeitsbedingungen ergriffen werden sollen.

Sie als Mitglied der Geschäftsleitung müssen sich nun Ihren Standpunkt zur Verbesserung der Arbeitsbedingungen überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(2)

Sie befinden sich noch immer an der Sitzung der Geschäftsleitung. Vor der Schlussabstimmung werden noch andere Themen diskutiert.

Ihre Firma gerät weltweit unter starken Beschuss, weil bei der Produktion grosse Mengen von Schadstoffen in die Umwelt freigesetzt werden. An der Sitzung wird deshalb diskutiert, ob Massnahmen zum Schutz der Umwelt ergriffen werden sollen.

Sie als Mitglied der Geschäftsleitung müssen sich nun Ihren Standpunkt zum Schutz der Umwelt überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

(3)

An der Schlussabstimmung werden beide Vorschläge, nämlich die Verbesserung der Arbeitsbedingungen und die Massnahmen zum Schutz der Umwelt gutgeheissen.

Der ebenfalls anwesende Finanzchef Ihrer Firma meldet nun aber, dass nicht genügend Geld für beide Vorschläge vorhanden sei. Eine weitere Abstimmung darüber, welcher der beiden Vorschläge bevorzugt werden soll, endet mit einem Resultat von 3 zu 3 Stimmen.

Nun müssen Sie als Vorsitzender der Geschäftsleitung den Stichentscheid fällen. Sie stehen also vor der Entscheidung zwischen folgenden Alternativen:

A

**Verbesserung der
Arbeitsbedingungen**

oder

B

Schutz der Umwelt

6.1.4.5 Routine Trade-Off “Job Offer”

(1)

Stellen Sie sich vor, Sie sind als Elternteil allein für den finanziellen Unterhalt Ihrer dreiköpfigen Familie zuständig. Seit einiger Zeit informieren Sie sich regelmässig über offene Stellen in Ihrer Firma, da Sie mit der jetzigen Stelle aus verschiedenen Gründen unzufrieden sind.

Sie erfahren nun, dass vor kurzem in einer anderen Abteilung eine Stelle frei geworden ist, bei der Sie mehr verdienen würden als bisher.

Sie müssen sich nun Ihre Meinung zur Höhe des Einkommens überlegen.

(2)

Einige Tage später erfahren Sie, dass an einem anderen Firmensitz eine Stelle frei geworden ist, bei der Sie einen wesentlich kürzeren Arbeitsweg hätten als bisher.

Sie müssen sich nun Ihre Meinung zur Länge des Arbeitswegs überlegen.

(3)

Ihr Arbeitgeber befindet sich in einer Umstrukturierungsphase, ganze Abteilungen werden in andere Niederlassungen verlegt. Von Ihrem Vorgesetzten erfahren Sie, dass die Abteilung, in der Sie arbeiten, ganz aufgelöst wird. Er möchte Sie jedoch gerne weiterhin beschäftigen.

Er bietet Ihnen diejenigen zwei Stellen an, von denen Sie bereits früher erfahren haben. Bei der ersten Stelle hätten Sie ein höheres Einkommen, aber einen wesentlich längeren Arbeitsweg, weil sie an einen anderen Firmensitz verlegt worden ist. Bei der zweiten Stelle hätten Sie zwar einen wesentlich kürzeren Arbeitsweg, dafür ein tieferes Einkommen.

Ihr Vorgesetzter kann Ihnen nur diese beiden Angebote machen. Sie müssen sich nun also zwischen folgenden Alternativen entscheiden:

A

Höheres Einkommen

oder

B

Kürzerer Arbeitsweg

6.1.5 Experiment 2: E-Mail Invitation

Subject: Deine Teilnahme am Online-Entscheidungsexperiment

Studienteilnahmestunden* und Verlosung von 3 mal CHF 50!!

=====

Hallo!

Du hast dich letzten November in der Vorlesung Sozialpsychologie bei Prof. Hornung in die Teilnehmerliste für meine Entscheidungsexperimente eingeschrieben. Das Experiment kann bequem online auf jedem Computer durchgeführt werden und dauert nur 20-25 min. Es geht darum, sich in zwei verschiedene Problemsituationen hinein zu versetzen, welche einen Bezug zu gesellschaftlichen und alltagsrelevanten Themen haben. Vielen Dank für deine Teilnahme!

Deine Vorteile dabei: Du bekommst eine halbe Studienteilnahmestunde* gutgeschrieben, nimmst an einer Verlosung von 3 mal CHF 50 teil und bekommst einen interessanten Einblick in sozialpsychologische Online-Forschung.

Link zum Online-Experiment:

<http://www.psychologie.unizh.ch/cognisoz/survey/exp2>

Nochmals herzlichen Dank und ein erfolgreiches 2007!

Liebe Grüsse

Martin Hanselmann

PS: Dieses Experiment ist unabhängig von der Studie von Dorothea Wiesmann, Patrick Meier und Monika Leemann, für welche momentan ebenfalls TeilnehmerInnen gesucht werden.

* Bis zum Abschluss des Bachelor-Studiums in Psychologie müssen 10 Studienteilnahmestunden nachgewiesen werden. Es wird empfohlen, bereits im Assessmentstudium mit der Teilnahme an Studien zu beginnen. Siehe Wegleitung:


http://www.psychologie.unizh.ch/studium/_pdf/wegleitung_16.10.06.pdf

6.1.6 Experiment 2: Online Questionnaire

Note. The online questionnaire was implemented using Unipark EFS Survey (<http://www.unipark.info>). Below, the general procedure of the questionnaire using one selected decision scenario is shown. The second scenario followed the same procedure. In some cases, response scales have been recoded for the purpose of the manuscript. Items which do not pertain to the research reported here are omitted.

6.1.6.1 Introduction

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3%

Herzlichen Dank für Ihr Interesse an unserer Studie!

Mit dieser Studie wollen wir mehr darüber in Erfahrung bringen, wie Personen in verschiedenen Problemsituationen denken und entscheiden. Ihre Teilnahme ist für uns sehr wertvoll und dauert 15 bis 20 Minuten. Zum Schluss können Sie an einer **Verlosung von 3 mal CHF 50** teilnehmen und sich eine **halbe Studienteilnahmestunde*** anrechnen lassen.

Wir präsentieren Ihnen zwei Problemsituationen, in die Sie sich möglichst gut hineinversetzen sollen. Bitte lesen Sie die Themenbeschreibungen und dazugehörigen Fragen sorgfältig durch und antworten Sie spontan und ehrlich. Uns interessiert Ihre persönliche Meinung, es gibt also keine richtigen oder falschen Antworten. Alle Angaben werden selbstverständlich **vertraulich und anonym** behandelt.


Durch Klicken auf "**Weiter**" gelangen Sie zur nächsten Seite. Für weitere Fragen oder Bemerkungen stehen wir Ihnen gerne zur Verfügung.

*=Studierende der Psychologie an der Universität Zürich können sich mit ihrer Teilnahme eine halbe Studienteilnahmestunde anrechnen lassen. Eine entsprechende Bestätigung wird per E-Mail oder Post verschickt.

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Auf dieser Seite bitten wir Sie zuerst um ein paar Angaben zu ihrer Person.

Geschlecht:

☐ weiblich ☐ männlich


Wie alt sind Sie?

Was studieren (studierten) Sie im Hauptfach?

Weiter

6.1.6.2 Scenario: Taboo Trade-Off “Flood Protection”

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Bitte lesen Sie die folgende Problemstellung aufmerksam durch. Versuchen Sie, sich diese Situation möglichst lebhaft vor Augen zu führen und sich selber so gut wie möglich in sie hinein zu versetzen.

Problem 1

Stellen Sie sich vor, Sie seien Präsident einer sechsköpfigen Gemeindebehörde. Ihre Gemeinde wurde von einem starken Hochwasser arg in Mitleidenschaft gezogen. Da sie sich in einer gefährdeten Zone befindet, sind in Zukunft weitere Hochwasser nicht auszuschliessen.


Sie nehmen nun an einer Sitzung der Gemeindebehörde teil. Dort wird diskutiert, ob Massnahmen zur Verbesserung des Hochwasserschutzes ergriffen werden sollen.

Sie als Behördenmitglied müssen sich nun Ihren Standpunkt zur Verbesserung des Hochwasserschutzes überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

Bitte behalten Sie sich diese Problemsituation möglichst klar vor Augen und blättern Sie zur nächsten Seite.

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14%

Thema: Verbesserung des Hochwasserschutzes

Welchen Standpunkt haben Sie dazu?

Bei der Verbesserung des Hochwasserschutzes ...

	stimme gar nicht zu				stimme mittelmässig zu			stimme sehr zu
	1	2	3		4	5	6	7
... finde ich es richtig, Kosten-Nutzen Abwägungen zu machen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um etwas, das man nicht mit einem Geldwert beziffern kann.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um etwas, das man nicht opfern sollte, egal wie hoch der (finanzielle oder sonstige) Nutzen ist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... kann ich flexibel sein, wenn es die Situation verlangt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um Dinge oder Werte, die unantastbar sind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter



Bitte lesen Sie nun die Fortsetzung von Problem 1.

Fortsetzung von Problem 1

Sie befinden sich noch immer an der Sitzung der Gemeindebehörde. Vor der Schlussabstimmung werden noch andere Themen diskutiert.


Der Dorfplatz ist der geografische und soziale Mittelpunkt Ihrer Gemeinde und befindet sich zunehmend in einem unschönen Zustand, wie die vielen wild parkierten Autos und der löchrige Strassenbelag zeigen. An der Sitzung wird deshalb diskutiert, ob Massnahmen zur Verschönerung des Dorfplatzes ergriffen werden sollen.

Sie als Behördenmitglied müssen sich nun Ihren Standpunkt zur Verschönerung des Dorfplatzes überlegen, um bei der Schlussabstimmung Ihre Stimme abgeben zu können.

Bitte behalten Sie sich diese Problemsituation weiterhin möglichst klar vor Augen und blättern Sie zur nächsten Seite.

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Thema: Verschönerung des Dorfplatzes

Welchen Standpunkt haben Sie dazu?

Bei der Verschönerung des Dorfplatzes ...

	stimme gar nicht zu			stimme mittelmässig zu			stimme sehr zu	
	1	2	3	4	5	6	7	
... geht es um etwas, das man nicht opfern sollte, egal wie hoch der (finanzielle oder sonstige) Nutzen ist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
... finde ich es richtig, Kosten-Nutzen Abwägungen zu machen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
... geht es um Dinge oder Werte, die unantastbar sind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
... geht es um etwas, das man nicht mit einem Geldwert beziffern kann.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
... kann ich flexibel sein, wenn es die Situation verlangt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Weiter



Bitte lesen Sie nun eine weitere Fortsetzung von Problem 1.

Fortsetzung von Problem 1

An der Schlussabstimmung werden beide Vorschläge, nämlich die Verbesserung des Hochwasserschutzes und die Verschönerung des Dorfplatzes gutgeheissen.

Der ebenfalls anwesende Kassenwart Ihrer Gemeinde meldet nun aber, dass nicht genügend Geld für beide Vorschläge vorhanden sei. Eine weitere Abstimmung darüber, welcher der beiden Vorschläge bevorzugt werden soll, endet mit einem Resultat von 3 zu 3 Stimmen.

Nun müssen Sie als Präsident der Gemeindebehörde den Stichentscheid fällen. Sie stehen also vor der Entscheidung zwischen folgenden Alternativen:

A

**Verbesserung des
Hochwasserschutzes**

oder

B

Verschönerung des Dorfplatzes

Bitte behalten Sie sich diese Problemsituation weiterhin möglichst klar vor Augen und blättern Sie zur nächsten Seite.

Weiter



Zur Erinnerung: Sie stehen vor folgender Entscheidung

**A) Verbesserung des
Hochwasserschutzes**

oder

**B) Verschönerung des
Dorfplatzes**

Wie fühlen Sie sich in der beschriebenen Entscheidungssituation?

Es folgt nun eine Liste mit Wörtern, die unterschiedliche Gefühle und Empfindungen beschreiben. Gehen Sie bitte alle Wörter der Liste nacheinander durch und kreuzen Sie bei jedem Wort die verspürte Intensität an. Sie können dabei zwischen fünf Abstufungen wählen.

In der beschriebenen Entscheidungssituation fühle ich mich ...

	ganz wenig oder gar nicht 1	ein bisschen 2	einigermassen 3	erheblich 4	äusserst 5
verärgert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
erschrocken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
feindselig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
fröhlich	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
freudig erregt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
interessiert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
unruhig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
bekümmert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gelassen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
schuldig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
aktiv	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
angeregt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
bedrückt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
stark	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Fortsetzung der Liste auf der nächsten Seite. Bitte weiter...

Weiter



Zur Erinnerung: Sie stehen vor folgender Entscheidung

**A) Verbesserung des
Hochwasserschutzes**

oder

**B) Verschönerung des
Dorfplatzes**

Wie fühlen Sie sich in der beschriebenen Entscheidungssituation? (Fortsetzung)

In der beschriebenen Entscheidungssituation fühle ich mich ...

	ganz wenig oder gar nicht 1	ein bisschen 2	einigermassen 3	erheblich 4	äusserst 5
stolz	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
betrübt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gereizt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
wach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ängstlich	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
beschämt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
entschlossen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
durcheinander	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
wütend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
begeistert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
nervös	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
angespannt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ruhig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
aufmerksam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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45%

Zur Erinnerung: Sie stehen vor folgender Entscheidung

A) Verbesserung des Hochwasserschutzes

oder

B) Verschönerung des Dorfplatzes

Wie leicht oder schwer fällt Ihnen diese Entscheidung?

Diese Entscheidung fällt mir ...


sehr leicht -3	-2	-1	mittelmässig 0	1	2	sehr schwer 3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Bitte kreuzen Sie bei jeder der folgenden Fragen jeweils die Antwortmöglichkeit an, die am ehesten für die beschriebene Entscheidungssituation zutrifft.

	trifft gar nicht zu				trifft zum Teil zu			trifft sehr zu
	1	2	3		4	5	6	7
Ich bräuchte noch mehr Zeit für eine Entscheidung.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diese Entscheidung bringt mich in einen starken Konflikt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bei dieser Entscheidung bin ich mir sicher, welche Alternative ich wähle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ich würde nicht lange über diese Entscheidung nachdenken.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter

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48%

Zur Erinnerung: Sie stehen vor folgender Entscheidung

A) Verbesserung des Hochwasserschutzes

oder

B) Verschönerung des Dorfplatzes

Bitte geben Sie nun an, für welche der beiden Alternativen Sie sich entscheiden.

Ich entscheide mich ...

A: klar für die Verbesserung des Hochwasserschutzes

unentschieden

B: klar für die Verschönerung des Dorfplatzes

-3

-2

-1

0

1

2

3

☐

☐

☐

☐

☐

☐


☐

Auf der nächsten Seite beginnt die Beschreibung der 2. Problemsituation. Bitte klicken Sie "Weiter".

Weiter

6.1.6.3 Conclusion

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93%

**Noch eine letzte, für uns wichtige Frage:
Haben Sie die Fragen in dieser Umfrage sorgfältig und ehrlich beantwortet?**

☐ Ja ☐ Nein

Auf der letzten Seite haben Sie die Möglichkeit, eine Bestätigung für die Studienteilnahme anzufordern und an der Verlosung von 3 mal CHF 50 teilzunehmen.

Bitte klicken Sie auf "Weiter".

Weiter

**Herzlichen Dank für Ihre Mitarbeit!**

Das Ziel dieser Studie ist die Untersuchung des Zusammenhangs von spezifischen Entscheidungskonstellationen, Konfliktwahrnehmung und Emotionen.

Wenn Sie eine Bestätigung für die Anrechnung einer halben **Studienteilnahmestunde*** wünschen, an der **Verlosung von 3 mal CHF 50**** teilnehmen möchten, oder wenn wir Sie unverbindlich für eine weitere Studienteilnahme anfragen dürfen, so markieren Sie bitte die entsprechenden Stellen und geben Sie unten Ihre Kontaktangaben an. Auch diese Daten werden streng vertraulich behandelt. Eine Bestätigung schicken wir Ihnen per E-Mail oder Post zu. Für Fragen oder Bemerkungen stehen wir Ihnen gerne zur Verfügung. **Bitte bestätigen Sie anschliessend zum letzten Mal mit "Weiter".**

Bitte Gewünschtes ankreuzen:

☐ Ja, ich wünsche eine **Studienteilnahme-Bestätigung** (1/2 Studienteilnahmestunde)*

☐ Ja, ich möchte an der **Verlosung von 3 mal CHF 50**** teilnehmen

☐ Ja, Sie können mich für eine weitere Studienteilnahme unverbindlich kontaktieren

Bitte geben Sie uns folgende Kontaktangaben an:

Name, Vorname	<input type="text"/>
Strasse, Nr.	<input type="text"/>
PLZ, Ort	<input type="text"/>
Matrikel-Nr.	<input type="text"/>
E-Mail	<input type="text"/>

Bemerkungen:

<input type="text"/>	
----------------------	--

Bitte klicken Sie zum letzten Mal auf "Weiter".

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Psychologisches Institut
Kognitive Sozialpsychologie
lic. phil. Martin Hanselmann & Prof. Dr. Carmen Tanner
E-Mail: martin.hanselmann@psychologie.unizh.ch

*=Studierende der Psychologie an der Universität Zürich können sich mit ihrer Teilnahme eine halbe Studienteilnahmestunde anrechnen lassen.

**=Über die Verlosung wird keine Korrespondenz geführt. Der Rechtsweg ist ausgeschlossen.

Weiter

6.2 Appendix to the Manuscript Hanselmann, Tanner, & Duc (2010)

6.2.1 Experiment 1: Decision Scenarios

6.2.1.1 *Taboo Trade-Off “Counterterrorism”*

Folter bei der Polizei

Sie arbeiten bei der Polizei und sind als Untersuchungsleiter/in für den folgenden Fall zuständig. Die Polizei konnte eine Person festnehmen, die verdächtigt wird, zusammen mit anderen Leuten Terroranschläge zu planen. Der Verhaftete weigert sich, Angaben zu seinen Plänen und zu anderen beteiligten Personen zu machen.

Als Untersuchungsleiter/in müssen Sie nun über weitere Schritte entscheiden. Zusammen mit Ihren Mitarbeitern diskutieren Sie über die Anwendung von Foltermassnahmen. Damit könnte man den Verhafteten zur Herausgabe von Informationen zwingen. Folgende zwei Standpunkte werden bei der Diskussion vertreten:

- Mit der Anwendung von Foltermassnahmen verstösst man gegen die Menschenrechte. Deshalb lehnt ein Teil Ihrer Mitarbeiter die Foltermassnahmen ab.
- Die nationale Sicherheit steht auf dem Spiel, wenn keine Foltermassnahmen angewendet werden. Deshalb befürwortet ein Teil Ihrer Mitarbeiter die Foltermassnahmen.

Sie als Untersuchungsleiter/in müssen nun Ihren Standpunkt darlegen und anschliessend eine Entscheidung fällen.

6.2.1.2 *Tragic Trade-Off “Kidnapping”*

Folter bei der Polizei

Sie arbeiten bei der Polizei und sind als Untersuchungsleiter/in für den folgenden Fall zuständig. Die Polizei konnte den Entführer eines fünfjährigen Kindes festnehmen. Wo er das Kind versteckt hat, bleibt aber unklar. Der Entführer weigert sich, Angaben über das Versteck und über die Verfassung des Kindes zu machen.

Als Untersuchungsleiter/in müssen Sie nun über weitere Schritte entscheiden. Zusammen mit Ihren Mitarbeitern diskutieren Sie über die Anwendung von Foltermassnahmen. Damit könnte man den Entführer zur Herausgabe von Informationen zwingen. Folgende zwei Standpunkte werden bei der Diskussion vertreten:

- Mit der Anwendung von Foltermassnahmen verstösst man gegen die Menschenrechte. Deshalb lehnt ein Teil Ihrer Mitarbeiter die Foltermassnahmen ab.
- Das Leben des Kindes steht auf dem Spiel, wenn keine Foltermassnahmen angewendet werden. Deshalb befürwortet ein Teil Ihrer Mitarbeiter die Foltermassnahmen.

Sie als Untersuchungsleiter/in müssen nun Ihren Standpunkt darlegen und anschliessend eine Entscheidung fällen.

6.2.2 Experiment 1: E-Mail Invitation

Subject: Und du, wie entscheidest du dich? Eine Online-Studie

Liebe Studentin, Lieber Student

Deine Meinungen und Einstellungen sind wichtige Bestandteile deiner Persönlichkeit und beeinflussen dich in deinem Handeln. Welchen Einfluss haben sie auf deine Entscheidungen, welche du bei aktuellen gesellschaftlichen Streitfragen oder in Situationen des Alltags triffst?

Anhand einer kurzen Online-Studie untersuchen wir das Entscheidungsverhalten in verschiedenen Situationen. Wir präsentieren dir drei hypothetische, aber dennoch realistische Entscheidungssituationen, in welche du dich hineinversetzen sollst.

Deine Teilnahme an dieser Studie ist für uns äusserst wertvoll! Sie dauert nur etwa 15-20 Minuten. Alle Angaben werden selbstverständlich vertraulich und anonym behandelt. Am Schluss kannst Du an einer Verlosung teilnehmen.

Link zur Online-Studie:

<http://www.psychologie.unizh.ch/cognisoz/survey/stpv2>

Wir sind auf deine Unterstützung angewiesen - vielen Dank, dass du dabei bist!

Liebe Grüsse

Martin Hanselmann

Martin Hanselmann

Universität Zürich

Psychologisches Institut

Kognitive Sozialpsychologie

Telefon: 044 634 41 06

E-Mail: martin.hanselmann@psychologie.unizh.ch

6.2.3 Experiment 1: Online Questionnaire

Note. The online questionnaire was implemented using Unipark EFS Survey (<http://www.unipark.info>). Below, the general procedure of the questionnaire using one selected decision scenario is shown. The alternative scenario followed the same procedure. In some cases, response scales have been recoded for the purpose of the manuscript. Scenarios and items which do not pertain to the research reported here are omitted.

6.2.3.1 Introduction

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Herzlichen Dank für Ihr Interesse an unserer Studie!

Mit dieser Studie untersuchen wir persönliche Meinungen und **Entscheidungen**, sowohl in aktuellen gesellschaftlichen **Streitfragen** als auch in **Situationen des Alltags**. Mit Ihrer Teilnahme helfen Sie uns mehr darüber in Erfahrung zu bringen, wie Personen in verschiedenen Problemsituationen entscheiden und welchen Einfluss ihre Meinungen und Einstellungen dabei ausüben.

Ihre Teilnahme an dieser Studie ist für uns äusserst wertvoll, sie wird nur etwa 20 Minuten in Anspruch nehmen. Zum Schluss können Sie an einer **Verlosung von 3 mal CHF 100** teilnehmen.


Es werden Ihnen verschiedene hypothetische, aber dennoch **realistische Entscheidungssituationen** präsentiert, in welche Sie sich hineinversetzen sollen, um eine Entscheidung zu treffen. Bitte lesen Sie die Fragen sorgfältig durch und beantworten Sie diese möglichst spontan und ehrlich. Uns interessiert Ihre persönliche Meinung, es gibt keine richtigen oder falschen Antworten. Alle Angaben werden selbstverständlich streng **vertraulich und anonym** behandelt.

Durch Klicken auf "**Weiter**" gelangen Sie zur nächsten Seite. Für weitere Fragen oder Bemerkungen stehen wir Ihnen gerne zur Verfügung.

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Kognitive Sozialpsychologie

Auf dieser Seite geht es zunächst um ein paar Angaben zu ihrer Person.

Geschlecht:

☐ weiblich ☐ männlich

Wie alt sind Sie?

Jahre

Welcher beruflichen Tätigkeit gehen Sie zur Zeit nach (hauptberuflich)?

Studieren/studierten Sie an einer Universität oder Fachhochschule?

☐ Ja ☐ Nein ☐ Keine Antwort

Falls ja, in welcher Fakultät/Fachrichtung?



Thema: Folter

Soll die Anwendung von Folter in gewissen Situationen zugelassen werden?
Damit verstösst man gegen die Menschenrechte, wird argumentiert.

Was denken Sie über Menschenrechte im Zusammenhang mit dem Thema Folter?

Menschenrechte sind etwas...

	stimme gar nicht zu	1	2	3	stimme mittelmässig zu	4	5	6	7	stimme sehr zu
... das man unter allen Umständen verteidigen sollte.	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
... zu dem sich meine Haltung im Verlauf der Zeit ändern könnte.	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
... zu dem ich meine Meinung nicht ändern werde, koste es was es wolle.	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
... bei dem ich Mühe hätte, Zugeständnisse zu machen.	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Weiter



Auf dieser und den zwei folgenden Seiten finden Sie kurze Beschreibungen verschiedener Personen. Lesen Sie bitte jede Beschreibung durch und überlegen Sie sich, wie ähnlich Ihnen die jeweilige Person ist.

Bitte markieren Sie in jeder Zeile den zutreffenden Kreis.

	Ist mir sehr ähnlich	Ist mir ähnlich	Ist mir etwas ähnlich	Ist mir nur ein kleines bisschen ähnlich	Ist mir nicht ähnlich	Ist mir überhaupt nicht ähnlich
Es ist ihr wichtig, neue Ideen zu haben und kreativ zu sein. Sie mag es, die Dinge auf ihre eigene originelle Art anzugehen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, reich zu sein. Sie möchte viel Geld und teure Sachen besitzen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sie glaubt, dass es wichtig ist, dass alle Menschen in der Welt gleich behandelt werden. Sie denkt, dass jeder Mensch im Leben gleiche Chancen haben soll.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr sehr wichtig, ihre Fähigkeiten zu zeigen. Sie möchte, dass die Leute bewundern, was sie tut.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, in einem sicheren Umfeld zu leben. Sie vermeidet alles, was ihre Sicherheit gefährden könnte.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sie hält es für wichtig, viele verschiedene Dinge im Leben zu tun. Sie sucht immer nach neuen Dingen, die sie ausprobieren kann.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Für sie ist wichtig, dass die Menschenrechte geachtet werden. Sie findet, dass Menschenrechte für alle Menschen gültig sind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sie glaubt, dass die Menschen das tun sollten, was ihnen gesagt wird. Sie denkt, dass man Regeln immer befolgen sollte, auch wenn keiner hinsieht.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter



	Ist mir sehr ähnlich	Ist mir ähnlich	Ist mir etwas ähnlich	Ist mir nur ein kleines bisschen ähnlich	Ist mir nicht ähnlich	Ist mir überhaupt nicht ähnlich
Es ist ihr wichtig, Menschen zuzuhören, die anders sind als sie. Sogar, wenn sie nicht ihrer Meinung sind, möchte sie sie trotzdem verstehen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sie denkt, dass es wichtig ist, nicht mehr zu verlangen als man hat. Sie glaubt, dass die Menschen mit dem zufrieden sein sollten, was sie haben.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Das Leben zu genießen, ist sehr wichtig für sie. Sie "verwöhnt" sich gerne selbst.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, selbst zu entscheiden, was sie tut. Sie möchte ihre Aktivitäten gerne selbst planen und auswählen können.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr sehr wichtig, den Menschen in ihrem Umfeld zu helfen. Sie möchte sich um ihr Wohlbefinden kümmern.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, sehr erfolgreich zu sein. Sie mag es, andere Leute zu beeindrucken.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr sehr wichtig, dass ihr Land in Sicherheit ist. Sie denkt, dass der Staat gegen Bedrohungen von innen und aussen auf der Hut sein muss.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter



	Ist mir sehr ähnlich	Ist mir ähnlich	Ist mir etwas ähnlich	Ist mir nur ein kleines bisschen ähnlich	Ist mir nicht ähnlich	Ist mir überhaupt nicht ähnlich
Sie findet, dass das Wohlergehen von Kindern in besonderem Masse beachtet werden soll. Ihr ist es wichtig, Kinder als die schwächsten Mitglieder der Gesellschaft zu schützen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sie geht gerne Risiken ein. Sie hält immer nach Abenteuern Ausschau.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, sich immer gut zu benehmen. Sie möchte es vermeiden, Dinge zu tun, über die andere sagen würden, dass sie falsch seien.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, die Führung zu übernehmen und anderen zu sagen, was sie tun sollen. Sie möchte, dass die anderen tun, was sie sagt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, ihren Freunden treu zu sein. Sie möchte sich den Menschen, die ihr nahe stehen, widmen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sie ist fest davon überzeugt, dass die Menschen sich für die Natur einsetzen sollten. Es ist ihr wichtig, sich um die Umwelt zu kümmern.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Es ist ihr wichtig, religiös zu sein. Sie bemüht sich sehr, nach ihrer religiösen Überzeugung zu leben.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sie sucht nach jeder Möglichkeit, Spass zu haben. Es ist ihr wichtig, Dinge zu tun, die ihr Freude bereiten.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter

6.2.3.2 Scenario: Taboo Trade-Off “Counterterrorism”

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Bitte lesen Sie die folgende Problemstellung aufmerksam durch. Versuchen Sie, sich so gut wie möglich in die Situation hinein zu versetzen und sich ernsthaft zu überlegen, wie Sie handeln würden.

Folter bei der Polizei

Sie arbeiten bei der Polizei und sind als Untersuchungsleiter/in für den folgenden Fall zuständig. Die Polizei konnte eine Person festnehmen, die verdächtigt wird, zusammen mit anderen Leuten Terroranschläge zu planen. Der Verhaftete weigert sich, Angaben zu seinen Plänen und zu anderen beteiligten Personen zu machen.


Als Untersuchungsleiter/in müssen Sie nun über weitere Schritte entscheiden. Zusammen mit Ihren Mitarbeitern diskutieren Sie über die Anwendung von Foltermassnahmen. Damit könnte man den Verhafteten zur Herausgabe von Informationen zwingen. Folgende zwei Standpunkte werden bei der Diskussion vertreten:

- Mit der Anwendung von Foltermassnahmen verstösst man gegen die Menschenrechte. Deshalb lehnt ein Teil Ihrer Mitarbeiter die Foltermassnahmen ab.
- Die nationale Sicherheit steht auf dem Spiel, wenn keine Foltermassnahmen angewendet werden. Deshalb befürwortet ein Teil Ihrer Mitarbeiter die Foltermassnahmen.

Sie als Untersuchungsleiter/in müssen nun Ihren Standpunkt darlegen und anschliessend eine Entscheidung fällen.

Weiter

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Meine Gedanken hinsichtlich der Anwendung von Foltermassnahmen sind ...

sehr zwiespältig -3	-2	-1	0	1	2	überhaupt nicht zwiespältig 3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hinsichtlich der Anwendung von Foltermassnahmen fühle ich mich ...

sehr hin- und hergerissen -3	-2	-1	0	1	2	überhaupt nicht hin- und hergerissen 3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hinsichtlich der Anwendung von Foltermassnahmen gehen meine Gedanken und Gefühle auseinander.

trifft ganz genau zu -3	-2	-1	0	1	2	völlig unzutreffend 3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ich habe gleichzeitig positive und negative Gefühle hinsichtlich der Anwendung von Foltermassnahmen.

trifft ganz genau zu -3	-2	-1	0	1	2	völlig unzutreffend 3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Wie entscheiden Sie sich als Untersuchungsleiter/in? Sollen Foltermassnahmen angewendet werden, um den Verhafteten zur Herausgabe von Informationen zu zwingen und um damit zur nationalen Sicherheit beizutragen?

Ich entscheide mich ...

**klar gegen
die Folter-
massnahmen
-3**

-2

-1

**unentschieden
0**

1

2


**klar für
die Folter-
massnahmen
3**



Weiter

6.2.3.3 Conclusion

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**Noch eine letzte, für uns wichtige Frage:
Haben Sie die Fragen in dieser Umfrage sorgfältig und ehrlich beantwortet?**

☐ Ja ☐ Nein

Auf der letzten Seite haben Sie die Möglichkeit, an der Verlosung von 3 mal CHF 100 teilzunehmen und mehr über Ziel und Zweck dieser Studie zu erfahren.

Bitte klicken Sie auf "Weiter".

Weiter

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Herzlichen Dank für Ihre Mitarbeit!

Das Ziel dieser Studie ist die Untersuchung des Einflusses von persönlichen Werten auf Entscheidungen, sowohl in aktuellen gesellschaftlichen Streitfragen als auch in Situationen des Alltags. Dabei ist von Interesse, inwiefern spezifische Konstellationen von Argumenten das Entscheidungsverhalten beeinflussen.

Wenn Sie an der Verlosung von 3 mal CHF 100* teilnehmen möchten, wenn Sie an einer Zusammenfassung der Ergebnisse dieser Studie interessiert sind, oder wenn wir Sie für eine Teilnahme an einer anderen Studie unverbindlich anfragen dürfen, so markieren Sie bitte die entsprechenden Stellen und geben Sie unten Ihre E-Mail-Adresse an. Ihre Anonymität ist auch hier gewährleistet. Für Fragen oder Bemerkungen stehen wir Ihnen gerne zur Verfügung. Bitte bestätigen Sie anschliessend zum letzten Mal mit "Weiter".

Bitte Gewünschtes ankreuzen:

- ☐ Ja, ich möchte an der **Verlosung von 3 mal CHF 100*** teilnehmen
- ☐ Ja, ich bin an einer Zusammenfassung der Ergebnisse interessiert
- ☐ Ja, Sie können mich für eine weitere Studienteilnahme unverbindlich kontaktieren

Bemerkungen:

Ihre E-Mail-Adresse (bitte mit "Weiter" bestätigen):

*=Über die Verlosung wird keine Korrespondenz geführt. Der Rechtsweg ist ausgeschlossen.

Universität Zürich
Psychologisches Institut
Kognitive Sozialpsychologie
lic. phil. Martin Hanselmann & Prof. Dr. Carmen Tanner
E-Mail: martin.hanselmann@psychologie.unizh.ch

Weiter

6.2.4 Experiments 2 and 3: Decision Scenarios

6.2.4.1 *Taboo Trade-Off “Robbery”*

Sie sind Chef der regionalen Polizeidirektion. Nach einem Jahrhundertpostraub und vielen erfolglosen Fahndungen ist es nun einer Ihrer Spezialeinheiten gelungen, einen der Täter zu verhaften. Er verweigert aber jegliche Aussage über den Verbleib der Beute.

Ein weiterer Misserfolg droht Ihren Ruf in der Öffentlichkeit zu schädigen. Da Sie das Geld unbedingt sicherstellen möchten, erwägen Sie, den Verhafteten durch Folter zu Aussagen über den Verbleib der Beute zu drängen.

Für welche der folgenden Alternativen entscheiden Sie sich?

Bitte wählen Sie die entsprechende Option aus.

A)

☐ **Folter zur Informationsbeschaffung anordnen**

B)

☐ **Auf Foltermassnahmen verzichten**

6.2.4.2 *Tragic Trade-Off “Time Bomb”*

Sie sind Polizeichef einer belebten Grossstadt. Man hat in Erfahrung gebracht, dass eine terroristische Organisation an einem von vielen Menschen frequentierten, aber nicht genauer bekannten Ort eine Zeitbombe platziert hat.

Ein mutmasslicher Drahtzieher des geplanten Anschlages konnte verhaftet werden. Er verweigert jedoch jegliche Aussage. Sie haben die Möglichkeit, die Folterung des Inhaftierten anzuordnen, um die benötigten Informationen über das Versteck der Bombe zu erhalten. Die Zeit zur Entschärfung der Bombe könnte sehr wahrscheinlich noch reichen.

Welche der beiden Alternativen wählen Sie?

Bitte wählen Sie die entsprechende Option aus.

A)

☐ **Folter zur Informationsbeschaffung anordnen**

B)

☐ **Auf Foltermassnahmen verzichten**

6.2.5 Experiments 2 and 3: E-Mail Invitation

Subject: Und du, wie entscheidest du dich? Eine Online-Studie

Liebe Studentin, lieber Student

Deine Überzeugungen und Einstellungen sind wichtige Faktoren, wenn es um das tägliche Handeln geht. Welchen Einfluss haben sie auf deine Entscheidungen, welche du bei aktuellen gesellschaftlichen Streitfragen oder in Situationen des Alltags triffst?

In unserer Forschung untersuchen wir solche Entscheidungen und führen nun eine kurze Online-Studie durch. Deine Teilnahme an dieser Studie ist für uns äusserst wertvoll und dauert nur 10 - 15 Minuten. Alle Angaben werden selbstverständlich vertraulich und anonym behandelt.

Um an der Studie teilzunehmen, klicke bitte auf den folgenden Link:
<http://ww3.unipark.de/uc/entscheidungsstudie4>

Wir freuen uns auf deine Teilnahme, herzlichen Dank!

Liebe Grüsse,


Martin Hanselmann
Andrea Steiger
Kathrin Derungs
Prof. Dr. C. Tanner

Universität Zürich
Psychologisches Institut
Kognitive Sozialpsychologie
Telefon: 044 635 71 76
E-Mail: entscheidungsstudie.unizh@gmail.com

6.2.6 Experiment 2: Online Questionnaire

Note. The online questionnaire was implemented using Unipark EFS Survey (<http://www.unipark.info>). Below, the general procedure of the questionnaire using one selected decision scenario is shown. The alternative scenario followed the same procedure. In some cases, response scales have been recoded for the purpose of the manuscript. Scenarios and items which do not pertain to the research reported here are omitted.

6.2.6.1 Introduction



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Vielen Dank für Ihr Interesse an unserer Studie!

Ihre Überzeugungen und Einstellungen sind sehr wichtige Faktoren, wenn es um das tägliche Handeln geht. Welchen Einfluss haben sie auf Ihre Entscheidungen, welche Sie bei aktuellen gesellschaftlichen Streitfragen oder in Situationen des Alltags treffen? In unserer Forschung möchten wir untersuchen, wie Menschen bei Entscheidungen vorgehen und welche Denkprozesse dabei ablaufen. Es geht um verschiedene Themen des Alltags und der Gesellschaft im Allgemeinen.

Die Teilnahme dauert nur 5 min. Alle Angaben werden selbstverständlich vertraulich und anonym behandelt.

Am Schluss des Fragebogens haben Sie zudem die Möglichkeit, sich für eine weitere Untersuchung von uns anzumelden, bei der Sie bis zu **30 Franken** verdienen können.

Wichtig: Bitte nehmen Sie nur teil, wenn Sie **noch nicht** an den Entscheidungsstudien von Steiger & Derungs (Plattenstrasse 32) oder Tomasi & Hohermuth (Oerlikon) teilgenommen haben.

Bitte nehmen Sie sich für das Ausfüllen einen ruhigen Moment Zeit und versuchen Sie, Ablenkungen so gut als möglich zu vermeiden. Lesen Sie die Instruktionen und die Fragen sorgfältig durch und antworten Sie spontan und ehrlich. Uns interessiert Ihre persönliche Meinung; es gibt demnach keine richtigen oder falschen Antworten.


Um an der Studie teilzunehmen, klicken Sie auf den untenstehenden **Weiter**-Button.

Studienleitung:
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lic. phil. Martin Hanselmann, Andrea Steiger, Kathrin Derungs

Kontakt: entscheidungsstudie.unizh@gmail.com

Weiter

6.2.6.2 Scenario: Taboo Trade-Off “Robbery”



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Situation 3 von 4:

Sie sind Chef der regionalen Polizeidirektion. Nach einem Jahrhundertpostraub und vielen erfolglosen Fahndungen ist es nun einer Ihrer Spezialeinheiten gelungen, einen der Täter zu verhaften. Er verweigert aber jegliche Aussage über den Verbleib der Beute.

Ein weiterer Misserfolg droht Ihren Ruf in der Öffentlichkeit zu schädigen. Da Sie das Geld unbedingt sicherstellen möchten, erwägen Sie, den Verhafteten durch Folter zu Aussagen über den Verbleib der Beute zu drängen.

Für welche der folgenden Alternativen entscheiden Sie sich?

Bitte wählen Sie die entsprechende Option aus.

A)	B)
<input type="radio"/> Folter zur Informationsbeschaffung anordnen	<input type="radio"/> Auf Foltermassnahmen verzichten

Bitte behalten Sie sich diese Situation weiterhin möglichst klar vor Augen und blättern Sie zur nächsten Seite.

Weiter



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Zur Erinnerung nochmals die Entscheidungssituation:

A) Folter zur Informationsbeschaffung anordnen

oder

B) Auf Foltermassnahmen verzichten

1) Wie beurteilen Sie die beiden Entscheidungsalternativen in dieser Situation?

	absolut nicht akzeptabel							völlig akzeptabel	
	1	2	3	4	5	6	7		
Alternative A finde ich...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alternative B finde ich...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2) Bitte geben Sie an, inwieweit Sie mit folgenden Aussagen übereinstimmen.

Bei dieser Entscheidungssituation...

	stimme gar nicht zu							stimme mittelmässig zu				stimme sehr zu	
	1	2	3	4	5	6	7						
... kann ich flexibel sein, wenn es die Situation verlangt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um Dinge oder Werte, die unantastbar sind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um etwas, das man nicht mit einem Geldwert beziffern kann.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... finde ich es richtig, Kosten-Nutzen Abwägungen zu machen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um etwas, das man nicht opfern sollte, egal wie hoch der (finanzielle oder sonstige) Nutzen ist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter



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Zur Erinnerung nochmals die Entscheidungssituation:

A) Folter zur Informationsbeschaffung anordnen

oder

B) Auf Foltermassnahmen verzichten

3) Wie fühlen Sie sich in dieser Entscheidungssituation?

Bitte geben Sie an, inwieweit folgende Aussagen für Sie zutreffen.

	trifft gar nicht zu				trifft teilweise zu			trifft voll und ganz zu
	1	2	3		4	5	6	7
In dieser Entscheidungssituation fühle ich mich entspannt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vor diese Entscheidung gestellt, fühle ich mich unwohl.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diese Entscheidungssituation empfinde ich als belastend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter



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Zur Erinnerung nochmals die Entscheidungssituation:

A) Folter zur Informationsbeschaffung anordnen

oder

B) Auf Foltermassnahmen verzichten

4) Wie nehmen Sie diese Entscheidungssituation wahr?

Bitte geben Sie an, inwieweit folgende Aussagen für Sie zutreffen.

	trifft gar nicht zu				trifft teilweise zu			trifft voll und ganz zu
	1	2	3		4	5	6	7
Diese Entscheidung bringt mich in einen Konflikt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bei dieser Entscheidung gibt es für mich keine Zweifel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bei dieser Entscheidung bin ich hin- und her gerissen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5) Letzte Frage zu dieser Entscheidungssituation:

Geben Sie an, was für Sie am besten zutrifft.

	sehr schwer						sehr leicht
	-3	-2	-1	0	1	2	3
Wie schwer oder leicht ist Ihnen diese Entscheidung gefallen?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Weiter

6.2.6.3 Conclusion



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Geschlecht:

☐ weiblich ☐ männlich

Wie alt sind Sie?

Jahre

Studieren/studierten Sie an einer Universität oder Fachhochschule?

☐ Ja ☐ Nein ☐ Keine Antwort

Falls ja, in welcher Fakultät/Fachrichtung?

Bitte auswählen

Bitte blättern Sie weiter...

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Vielen Dank für Ihre Teilnahme!

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- Anfangsbuchstaben des Vornamens Ihres Vaters
- Tag und Monat Ihres persönlichen Geburtsdatums (ohne Punkte)

Beispiel:

Name der Mutter: Erika
Name des Vaters: Georg
Persönliches Geburtsdatum: 08.03.1980

--> ergibt den **CODE: EG0803**

Wenn Sie nicht teilnehmen möchten, müssen Sie keinen Code eingeben und können das Umfragefenster direkt schliessen.

Wenn Sie teilnehmen möchten, geben Sie bitte Ihren eigenen Code (ohne Punkte und Abstände) ein.

Code:

Wenn Sie den Code eingeben haben, blättern Sie bitte nochmals auf die nächste Seite. Dort können Sie auf einen Doodle-Link klicken, um sich für einen Termin anzumelden. Wenn Sie nicht teilnehmen möchten, können Sie das Umfragefenster nun direkt schliessen.


*= Studierende der Psychologie können sich auf Wunsch anstelle der Entschädigung eine halbe Studienteilnahmestunde gutschreiben lassen.

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6.2.7 Experiment 3: Online Questionnaire

Note. The online questionnaire was implemented using Unipark EFS Survey (<http://www.unipark.info>). Below, the general procedure of the questionnaire using one selected decision scenario is shown. The alternative scenario followed the same procedure. In some cases, response scales have been recoded for the purpose of the manuscript. Scenarios and items which do not pertain to the research reported here are omitted.

6.2.7.1 Introduction



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Vielen Dank für Ihr Interesse an unserer Studie!

Ihre Überzeugungen und Einstellungen sind sehr wichtige Faktoren, wenn es um das tägliche Handeln geht. Welchen Einfluss haben sie auf Ihre Entscheidungen, welche Sie bei aktuellen gesellschaftlichen Streitfragen oder in Situationen des Alltags treffen? In unserer Forschung möchten wir untersuchen, wie Menschen bei Entscheidungen vorgehen und welche Denkprozesse dabei ablaufen. Es geht um verschiedene Themen des Alltags und der Gesellschaft im Allgemeinen.

Die Teilnahme dauert nur 5 min. Alle Angaben werden selbstverständlich vertraulich und anonym behandelt.

Am Schluss des Fragebogens haben Sie zudem die Möglichkeit, sich für eine weitere Untersuchung von uns anzumelden, bei der Sie bis zu **30 Franken** verdienen können.

Wichtig: Bitte nehmen Sie nur teil, wenn Sie **noch nicht** an den Entscheidungsstudien von Steiger & Derungs (Plattenstrasse 32) oder Tomasi & Hohermuth (Oerlikon) teilgenommen haben.

Bitte nehmen Sie sich für das Ausfüllen einen ruhigen Moment Zeit und versuchen Sie, Ablenkungen so gut als möglich zu vermeiden. Lesen Sie die Instruktionen und die Fragen sorgfältig durch und antworten Sie spontan und ehrlich. Uns interessiert Ihre persönliche Meinung; es gibt demnach keine richtigen oder falschen Antworten.


Um an der Studie teilzunehmen, klicken Sie auf den untenstehenden **Weiter**-Button.

Studienleitung:
Universität Zürich
Psychologisches Institut
Kognitive Sozialpsychologie
lic. phil. Martin Hanselmann, Andrea Steiger, Kathrin Derungs

Kontakt: entscheidungsstudie.unizh@gmail.com

Weiter

6.2.7.2 Scenario: Taboo Trade-Off “Robbery”



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Situation 3 von 4:

Sie sind Chef der regionalen Polizeidirektion. Nach einem Jahrhundertpostraub und vielen erfolglosen Fahndungen ist es nun einer Ihrer Spezialeinheiten gelungen, einen der Täter zu verhaften. Er verweigert aber jegliche Aussage über den Verbleib der Beute.

Ein weiterer Misserfolg droht Ihren Ruf in der Öffentlichkeit zu schädigen. Da Sie das Geld unbedingt sicherstellen möchten, erwägen Sie, den Verhafteten durch Folter zu Aussagen über den Verbleib der Beute zu drängen.

Für welche der folgenden Alternativen entscheiden Sie sich?

Bitte wählen Sie die entsprechende Option aus.

A) <input type="radio"/> Folter zur Informationsbeschaffung anordnen	B) <input type="radio"/> Auf Foltermassnahmen verzichten
---	---

Bitte behalten Sie sich diese Situation weiterhin möglichst klar vor Augen und blättern Sie zur nächsten Seite.

Weiter



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Zur Erinnerung nochmals die Entscheidungssituation:

A) Folter zur Informationsbeschaffung anordnen

oder

B) Auf Foltermassnahmen verzichten

1) Wie beurteilen Sie die beiden Entscheidungsalternativen in dieser Situation?

	gar nicht akzeptabel		mittelmässig akzeptabel		sehr akzeptabel
	1	2	3	4	5
Alternative A finde ich...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alternative B finde ich...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2) Bitte geben Sie an, inwieweit Sie mit folgenden Aussagen übereinstimmen.

Bei dieser Entscheidungssituation...

	stimme gar nicht zu		stimme mittelmässig zu		stimme sehr zu
	1	2	3	4	5
... geht es um Dinge oder Werte, die unantastbar sind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... finde ich es richtig, Kosten-Nutzen Abwägungen zu machen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um etwas, das man nicht mit einem Geldwert beziffern kann.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... geht es um etwas, das man nicht opfern sollte, egal wie hoch der (finanzielle oder sonstige) Nutzen ist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... kann ich flexibel sein, wenn es die Situation verlangt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Zur Erinnerung nochmals die Entscheidungssituation:

A) Folter zur Informationsbeschaffung anordnen

oder

B) Auf Foltermassnahmen verzichten

3) Was empfinden Sie in dieser Entscheidungssituation?

	trifft gar nicht zu		trifft mittelmässig zu		trifft sehr zu
	1	2	3	4	5
Empörung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zufriedenheit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stolz	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angst	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schuld	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Zur Erinnerung nochmals die Entscheidungssituation:

A) Folter zur Informationsbeschaffung anordnen

oder

B) Auf Foltermassnahmen verzichten

4) Noch zwei letzte Fragen zu dieser Entscheidungssituation:


Bitte geben Sie an, was für Sie am ehesten zutrifft.

	trifft gar nicht zu			trifft mittelmässig zu			trifft sehr zu
	1	2		3	4		5
Bei dieser Entscheidung fühle ich mich hin und her gerissen.	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>

	sehr schwer			mittel- mässig			sehr leicht
	-2	-1		0	1		2
Wie schwer oder leicht ist Ihnen diese Entscheidung gefallen?	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>

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6.2.7.3 Conclusion



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* = Studierende der Psychologie können sich auf Wunsch anstelle der Entschädigung eine halbe Studienteilnahmestunde gutschreiben lassen.

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6.3 Curriculum Vitae

Martin Hanselmann

Date of Birth: 7 October 1977. Nationality: Swiss Citizen.

Research Interests

- Moral decision making; effects of sacred values on individual decision making processes
- Dual processes and the role of emotions and intuition in decision making
- Trust, fairness, and cooperation

Education

- | | |
|-------------------|--|
| 08/2005 – 09/2010 | University of Zurich, Switzerland
Doctoral studies in Psychology (Advisors: Prof. C. Tanner and Prof. K. Jonas) |
| 10/1998 – 05/2005 | University of Zurich, Switzerland
Studies in Psychology (Focus on Social Psychology), Neurophysiology, and Informatics. Degree: Lic. phil. (equivalent to MSc) |
| 1991 – 1998 | Kantonsschule Zürcher Unterland, Bülach, Switzerland
Gymnasium, Matura Type A (Classical languages) |

Professional Experience

- | | |
|-------------------|--|
| 08/2005 – 09/2010 | University of Zurich, Switzerland
Research assistant at the Department of Psychology, Division Cognitive Social Psychology (Prof. C. Tanner) <ul style="list-style-type: none"> - Conduction of experimental and survey research projects - Acquisition of research grants - Teaching (e.g., course on intuition and emotions in decision making) - Supervision of student research projects |
| 10/2002 – 02/2005 | University of Zurich, Switzerland
Teaching assistant at the Department of Psychology, Division Social Psychology (Prof. H. Gutscher) <ul style="list-style-type: none"> - Course on experimental research methods - Course on correlational and causal analysis - Course on scaling methods |
| 02/2002 – 03/2002 | Bundesamt für Gesundheit, Bern, Switzerland
Internship (Fachstelle Gesundheitsförderung und Prävention im Schulbereich) |

Acquisition of Third-Party Funds

- | | |
|-------------------|---|
| 10/2008 - 09/2009 | Forschungskredit 2008 (Research grant from the University of Zurich) <ul style="list-style-type: none"> - Amount: CHF 60'000 - Project title: Emotionale und motivationale Funktionen von Geschützten Werten - Function: Applicant and project leader |
|-------------------|---|
-

Publications

Journal Articles

Duc, C., Hanselmann, M., Tanner, C., & Boesiger, P. (2010). *Impact of trade-off type and sacred value adherence on moral decision making: A combined fMRI and social psychological investigation*. Manuscript submitted for publication.

Hanselmann, M., Tanner, C., & Duc, C. (2010). *Should I approve of torture or not? Conflict and self-regulation processes when deciding on human rights issues*. Manuscript submitted for publication.

Tanner, C., Ryf, B., & Hanselmann, M. (2009). Geschützte Werte Skala (GWS): Konstruktion und erste Validierung eines Messinstrumentes [Sacred Value Measure (SVM): Construction and validation of an instrument to assess sacred values]. *Diagnostica*, 55, 174-183.

Hanselmann, M., & Tanner, C. (2008). Taboos and conflicts in decision making: Sacred values, decision difficulty, and emotions. *Judgment and Decision Making*, 3, 51-63.

Conference Presentations

Hanselmann, M., & Tanner, C. (2008, July). *Taboos and value conflicts: Styles of cognitive processing in moral decision making*. Poster session presented at the XXIX International Congress of Psychology, Berlin.

Hanselmann, M., & Tanner, C. (2007, September). *Moral decision making: Influence of sacred values on decision difficulty and negative emotions*. Referat am Kongress der Schweizerischen Gesellschaft für Psychologie, Zürich.

Tanner, C., & Hanselmann, M. (2007, März). *Was macht Entscheidungen schwieriger oder leichter? Die Rolle von Geschützten Werten*. Referat an der Tagung experimentell arbeitender Psychologen (TEAP), Trier.

Tanner, C., Ryf, B., & Hanselmann, M. (2007, Januar). „Geschützte Werte“ - ein neues Konzept in der Entscheidungs- und Sozialpsychologie. Referat am 23. Hamburger Symposion zur Methodologie der Sozialpsychologie, Hamburg.

Tanner, C., & Hanselmann, M. (2006, November). *Sacred values and emotional trade-off difficulty*. Talk presented at the Workshop: Intuition and affect in risk perception and decision making. University of Bergen, Norway.

Hanselmann, M., & Tanner, C. (2006, September). *Moral und Entscheidungen: Machen „Geschützte Werte“ Entscheidungen einfacher oder schwieriger?* Referat am Kongress der Deutschen Gesellschaft für Psychologie, Nürnberg.

Hanselmann, M., & Tanner, C. (2006, Juni). *Moral und Entscheidungen: Machen „Geschützte Werte“ Entscheidungen einfacher oder schwieriger?* Posterpräsentation am 4. LizentiandInnen- und DoktorandInnen Kongress des Psychologischen Instituts der Universität Zürich (LiDoKo), Zürich.

Academic Papers

Hanselmann, M. (2004). *Generalisiertes Vertrauen und Kooperation. Eine experimentelle Untersuchung des Zusammenhangs zwischen generalisiertem Vertrauen und kooperativem Verhalten*. Lizentiatsarbeit, Psychologisches Institut, Universität Zürich.